Health and Social Service Workforce in Alberta, 1991

Alberta
HEALTH AND SOCIAL SERVICES
DISCIPLINES COMMITTEE

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Highlights of the Report

Employers Surveyed

- The annual survey of health and social service employers was conducted on March 31, 1991 by the Alberta Health and Social Service Disciplines Committee. This survey requests health and social service employers to provide specific information on full-time and part-time permanent personnel, vacant positions, resignations, casual/contract personnel, and recruitment difficulties.
- Employer response to the 1991 survey was excellent. A total of 5,373 employers were mailed the questionnaires and of these, 98.6 percent responded.

Permanent Personnel

- Employers reported a modest increase of 0.5 percent in the total number of permanent health and social service personnel employed from 1990 to 1991. A decline in the number of full-time personnel (2.6%) and a substantial increase in the number of part-time personnel (6.6%) was the general trend observed from 1990 to 1991 for many of the occupations included in the survey.
- Acute care hospitals accounted for most of the decline in the number of full-time permanent personnel in the 1991 survey. In acute care facilities, the number of full-time permanent personnel declined by 1,653 (10.2%), while the number of part-time increased by 271 (2.8%).
- Nursing homes were one of the few health and social service employers to report a moderate increase (6.1%) in the total number of permanent personnel from 1990 to 1991. The increase in permanent personnel was seen in the number of part-time personnel (9.0%) and to a lesser extent, in the number of full-time personnel (2.7%).
- Registered nurses were one of the occupational groups which experienced the greatest drop in the number of full-time permanent personnel from 1990 to 1991. The total number of registered nurses employed full-time declined by 9.8 percent, while the number of nurses employed part-time increased by 6.8 percent.
- There was a very slight increase (0.2%) in the number of non-RN nursing personnel employed from 1990 to 1991. Like many other occupational groups, non-RN nursing personnel experienced an overall decline in the number of full-time personnel (6.0%) and an increase in the number of part-time personnel (7.7%).
- The number of personnel employed in diagnostic/therapeutic occupations declined by 7.2 percent from 1990 to 1991. A decrease was seen in the both the number of personnel employed full-time (9.9%) and part-time (0.7%).
- The number of rehabilitation personnel working full-time decreased slightly (0.9%), while the number of part-time rehabilitation personnel increased substantially (14.0%). Small increases from 1990 to 1991 were reported in the total number of occupational therapists (1.5%) and physical therapists (1.3%). There was a decline seen in the number of assistants/aides working in occupational therapy and physical therapy.
- Increases in total number of permanent personnel from 1990 to 1991 were reported for both dental assistants with intra-oral training (7.4%) and for dental hygienists (6.5%).
- The number of permanent personnel employed in social work/service occupations increased by 6.3 percent from 1990 to 1991. The most substantial growth within this occupational category was observed for alcoholism/addiction counsellors, who increased in number by 32.4 percent.

Percent Part-time

- The proportion of health and social service personnel employed part-time increased substantially from 33.7 percent in 1990 to 35.8 percent in 1991. The increase in the percentage of part-time personnel was a consistent pattern observed across many occupational groups.
- The percentage of part-time personnel increased substantially for registered nurses (41.6% to 45.8%), licensed practical nurses (46.7% to 50.4%), and 'other nursing' staff (47.2% to 51.3%).
- The percentage of part-time personnel employed in rehabilitation occupations increased from 27.8 percent (1990) to 30.7 percent (1991). Notable increases in the percentage of part-time from 1990 to 1991 were seen for occupational therapists (31.0% to 35.0%) and for speech-language pathologists (23.9% to 26.7%).
- Other comparatively high percentages of part-time personnel continued in 1991 for home care personnel (78.3%), dietary personnel (52.3%), dental hygienists (48.0%), electroencephalograph (EEG) technologists (47.5%), and combined laboratory and x-ray technicians (46.9%).
- For many occupations, the percentage of part-time was higher in rural areas compared to urban centres.

Casual/Contract/Temporary/Relief Personnel

- A comparatively small proportion of employers, 20.4 percent, reported employing casual/contract personnel during the month of March, 1991.

- Employers reported that a total of 4,005 full-time equivalent casual/contract personnel worked during March, 1991. Acute care hospitals accounted for the largest proportion, 49.0 percent, of the full-time equivalent casual/contract personnel employed during March, 1991.
- Among the occupations listed on the survey form[1], there was a small decline from 1990 to 1991 in both the number of full-time equivalent casual/contract positions reported and in the average number of hours worked.
- The largest numbers of full-time equivalent casual/contract personnel employed in March, 1991 were reported for registered nurses (1,371), licensed practical nurses (491), 'other' nursing staff (478), and day care personnel (418).

Vacancy Rates

- The total number of vacant positions (full-time equivalent) for all health and social service occupations declined significantly from 2,980 (1990) to 1,929 (1991). The overall vacancy rate dropped from 4.0 percent (1990) to 2.6 percent (1991). Most of the decline in vacancy rates was due to the decrease in the number of vacant full-time positions.
- The decline in the number of full-time equivalent vacant positions for registered nurses accounted for almost one-half (48.5%) of the decrease in the number of vacant positions reported in the 1991 survey. The total number of full-time equivalent positions vacant for registered nurses dropped from 794 (1990) to 284 (1991) while the corresponding vacancy rate declined from 5.0 percent (1990) to 1.9 percent (1991).
- The vacancy rate for licensed practical nurses dropped from 3.0 percent (1990) to 1.2 percent (1991). The vacancy rate for 'other' nursing staff continued to be relatively low in 1990 (1.9%) and 1991 (1.4%).
- Some notable vacancy rate declines among the rehabilitation occupations occurred for occupational therapists (14.9% to 9.6%), physical therapists (14.3% to 10.0%), and speech-language pathologists (13.8% to 5.9%).
- The diagnostic/therapeutic occupations continued to have relatively low vacancy rates in 1990 (2.8%) and 1991 (2.3%).
- The highest vacancy rate reported in the 1991 survey was for dental hygienists (16.2%). A total 123 full-time equivalent vacant positions was reported for this occupation in 1991.
- The vacancy rate for social work/service personnel declined slightly from 4.1 percent (1990) to 3.4 percent (1991).
- The vacancy rate for home care personnel had a notable decline from 5.2 percent (1990) to 2.9 percent (1991).
- For all health and social service occupations combined, the vacancy rate was 2.4 percent in large urban centres and 3.9 percent in rural areas. Higher vacancy rates in rural areas compared to large urban centres was the general pattern observed for many of the occupations in the survey.

Turnover Rates

- The total number of full-time equivalent resignations decreased from 10,759 (1990) to 9,664 (1991). The corresponding turnover rate for all health and social service occupations declined slightly from 14.5 percent (1990) to 13.3 percent (1991).
- Day care personnel continued to have the highest turnover rate among all health and social service personnel from 1990 (37.7%) to 1991 (36.0%). Over one half of the resignations by day care staff were by workers with no formal degree or diploma.
- Child/youth care personnel also continued to have one of the highest turnover rates in 1991 (19.6%), although this rate declined significantly from 1990 (24.9%). Close to one half of the resignations within this occupational category were by workers with a child/youth care diploma.
- Other particularly high turnover rates in 1991 were seen for home care personnel (18.8%) and eye care personnel (18.6%).
- Social work/service personnel had one of the largest increases in turnover rates from 1990 (9.1%) to 1991 (12.0%).
- The turnover rate for dental personnel declined from 15.8 percent (1990) to 12.8 percent (1991). Most of the decline was due to the decrease in turnover rates among dental assistants (18.0% to 13.6%) and dental hygienists (13.9% to 11.0%).
- Rehabilitation practitioners continued to have one of the highest turnover rates (22.1%) in 1991 among rehabilitation personnel. Turnover rate declines from 1990 to 1991 were seen for occupational therapists (19.6% to 17.7%) and for physical therapists (17.5% to 15.6%). There was a turnover rate increase for speech-language pathologists (10.6% to 14.9%).

[1] The occupations listed on the survey form were the same for all employers: registered nurses, licensed practical nurses, physical therapists, occupational therapists, psychologists, social workers, dietitians/nutritionists, pharmacists, audiologists/speech language pathologists, and dental hygienists.

- Declines in turnover rates were seen for many of the occupations employed by acute care hospitals. Turnover rates decreased from 1990 to 1991 for registered nurses (12.7% to 9.6%), licensed practical nurses (10.8% to 8.8%), 'other' nursing personnel (15.5% to 13.6%), and diagnostic/therapeutic personnel (10.9% to 9.1%).
- The turnover rate for all occupations combined was somewhat higher in large urban centres (14.3%) compared to rural areas (12.5%). There was, however, considerable variation observed in turnover rates across large urban, small urban, large town, and rural areas for different occupations.

Recruitment Difficulties

- Of the 885 employers who reported one or more vacancies on March 31, 1991, 408 (46.1%) indicated that the vacancy had been three months or longer in duration. Overall, there was a substantial decline in the number of employers who reported one or more three month vacancies from 1990 (503) to 1991 (408).
- The number of three month vacancies reported for all health and social service occupations dropped from 992 (1990) to 501 (1991). Registered nurses experienced one of the most dramatic declines in the number of three month vacancies from 1990 (247) to 1991 (35). Other notable declines in the number of three month vacancies occurred for social work/service personnel, dental assistants with intra-oral certification, psychologists, and pharmacists.
- The percentage of three month vacancies was generally higher in rural areas than in large urban centres. The percentage of three month vacant positions in rural areas was especially high for speech-language pathologists (100%), dental hygienists (91.7%), occupational therapists (83.3%), and physical therapists (73.3%).
- Employers were requested to identify the health and social service occupations for which they anticipated recruitment difficulties during the next year. Among all the employers surveyed, 21.5 percent (1,141) expected recruitment difficulties, while the majority, 65.8 percent (671), anticipated no recruitment problems.
- A comparatively large percentage of employers anticipated problems during 1991 in the recruitment of child care workers with a certificate in child education (73.6%), dental hygienists (47.1%), physical therapists (41.6%), emergency medical technicians-paramedic (36.4%) and emergency medical technicians-ambulance (29.1%).
- There was a low percentage of employers who expected difficulties in the recruitment of non-RN nursing personnel (1.2%), social workers (3.5%), registered nursing personnel (3.7%), diagnostic/therapeutic personnel (5.2%), psychologists (5.3%), and home care personnel (7.3%).
- The most frequent reasons given by employers for difficulties in the recruitment of health and social service personnel related to a shortage of available personnel (44.3%), an undesirable location (20.1%), or an inadequate salary (16.9%).

1. Introduction

The 1991 employer survey conducted by the Health and Social Services Disciplines Committee indicated marginal growth (0.5%) in the total number of permanent personnel employed in the health and social service sector from the previous year. The 86,335 permanent health and social service personnel reported by employers in 1991 represented 7.0 percent of the total employed labour force in Alberta. One of the major changes from 1990 to 1991 related to the substantial increase in the number of part-time personnel (6.6%) and the decline in the number of full-time personnel (2.6%). A brief review of the health and social service workforce in the context of the demographic, social, and economic climate of Alberta as a whole is given below, along with some anticipated future trends.

In 1990, the Canadian **economy entered a recession**. There was a modest growth rate in the Alberta economy, with marked volatility in two of its main industries. The gulf crisis temporarily drove oil prices above US$40 a barrel from US$16 earlier in the year, while grain prices plummeted. In comparison to other regions in Canada, however, the Alberta economy fared better due to higher oil prices and the investments in major resource projects. Alberta is expected to out perform the other provinces by a significant margin, with real growth averaging 0.8 percent in 1991 and 3.0 percent in 1992, markedly above the -1.2 percent and 2.3 percent forecast at the national level.

Cost containment and improved economic efficiency were some of the general themes prompted by the recession throughout most sectors in the province. The provincial government's efforts at budget control continued to limit the growth of public expenditures. In the health and social service sector, public funding mechanisms continued to exert pressure on employers to reduce costs and increase efficiency.

Alberta's total population grew by 52,000 (2.1%) from April 30, 1990 to March 31, 1991, the highest 12 month growth since 1982. The more promising economic and employment prospects in Alberta in comparison to other

provinces continued to boost both interprovincial migration (9,000), primarily from Ontario, and international migration levels (13,000) for the year ending March 31, 1991.

The **increase in the size of the labour force**, primarily due to the increased migration to the province, **exceeded the growth in employment**. The Labour Force Survey, conducted by Statistics Canada indicated that the annual employment growth rate (1.1%) from March, 1990 to March, 1991 was below the increase in the size of the Alberta labour force (2.7%). As a result, the seasonally adjusted **provincial unemployment rate increased** in March from 6.4 percent (1990) to 7.7 percent (1991).

There was an **increase in the number of unemployment insurance claims** filed by persons in health and social service occupations from March, 1990 to March, 1991. Some of the most substantial increases in the number of unemployment insurance claims filed from 1990 to 1991 occurred for registered nurses/graduate nurses/nurses in training (208 to 485), nursing attendants (295 to 396), social workers (219 to 249), licensed practical nurses (154 to 167), pharmacists (16 to 31), and dietitians/nutritionists (15 to 26).[2]

There are several major demographic, social, and economic trends which are expected to have a continuing impact on the health and social service sector. Some of these trends include:

Demographic trends indicate that by the year 2016, the proportion of people over the age of 65 in the province will double from 8 percent of the population to approximately 16 percent. The aging of the population will have widespread implications for the demand for health and social services and for the types of services required. In addition, it is forecast that as the population ages, the size of the labour pool will decline, resulting in labour shortages and increased competition for health and social service workers.

Population increases, due to rising levels of international migration, are expected to continue. The increase in the proportion of immigrants will have an impact on the social and ethnic composition of the population, which in turn, may impact the demand for health and social services and the type of delivery systems needed.

Educational requirements for employment are predicted to increase. By the year 2000, it is estimated that 64 percent of all new jobs (all employment sectors) will require post-secondary education. In the health and social service sector, professional associations, representing a variety of different occupations, continue to support increasing educational requirements for active registration. A demand for higher educational qualifications would decrease the size of the available labour pool and would increase the competition among employers for trained workers.

Limited growth in public expenditures is expected to continue into the foreseeable future. The rationalization of government funding mechanisms is expected to exert economic pressure on many employers in the health and social service sector. In order to increase efficiency and contain costs, employers may adopt a number of strategies including decreasing the number of employees, shifting from permanent to casual staff, increasing the proportion of part-time personnel, and increasing the delegation of duties to the lowest level of authority trained to perform a given task.

2. Survey Methodology

The mailing lists used to identify employers of health and social service personnel and self-employed professionals in the 1990 survey were verified and updated for the 1991 employer survey. The mailing list utilized for employers of home care personnel, in particular, was extensively updated.[3] A total of 5,373 employers were identified in the final 1991 mailing list.

These employers were mailed a survey form, along with a cover letter, and a pre-stamped envelope in March, 1991. When applicable, a letter of endorsement supporting the survey from a relevant organization was also included in the mail-out package. Employers were requested to return the survey by May 1, 1991. Additional mail-outs and telephone follow-ups were conducted as necessary for those employers who had not responded by May 16, 1991.

The study utilized 22 different survey forms. These forms varied primarily in terms of the occupations included in the questionnaires. For each survey form, only the occupations applicable to a particular health and social service employer group were listed. With the exception of the survey forms mailed to ambulance operators[4], each questionnaire was divided into three main sections.

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[2] The data on unemployment insurance claimants was supplied by the Alberta Bureau of Statistics. The data refers only to regular active claimants during March, 1990 and March, 1991. Regular active claimants include those claimants on lay-off; those who have voluntarily left their jobs and are looking for work; those who are part-time workers; those who are covered by job-sharing or job creation agreements who are trainees. It is important to note that the characteristics of the unemployment insurance claimant population cannot be interpreted as the characteristics of all unemployed persons as described by Statistics Canada's Labour Force Survey.

[3] Approximately 21 private contracting agencies of home care personnel were added to the 1991 survey mailing list.

[4] The survey form mailed to ambulance operators did not include the section measuring casual personnel.

SECTION A included a list of health and social service occupations and their definitions. For each occupation, the employer was asked to indicate the number of full-time and part-time personnel employed on March 31, 1991, the number of full-time and part-time vacant positions on March 31, 1991, and the total number of full-time and part-time resignations which occurred during the period between April 1, 1990 and March 31, 1991. The occupations listed in Section A were tailored to specific employer groups. A space was provided for the employer to specify other occupations not included in the list.

SECTION B asked the employer whether any casual, contract, temporary, or relief personnel were employed between March 1, 1991 and March 31, 1991. Post-secondary institutions and day care centres were requested to provide casual/contract data for the first time in 1991. All other employers, with the exception of ambulance operators, were asked to supply information on casual/contract personnel. Employers of casual/contract personnel were requested to specify the total number of casual/contract personnel employed and the total number of hours worked during the month of March by occupation. To encourage employer response, a number of occupations were explicitly listed on the questionnaire. The occupations listed were the same for all employers: registered nurses, licensed practical nurses, physical therapists, occupational therapists, psychologists, social workers, dietitians/nutritionists, pharmacists, audiologists/speech-language pathologists, and dental hygienists. A category for 'other' occupations was also provided.

SECTION C was divided into two parts, both of which collected information on 'difficult to recruit' occupations. Part 1 was designed to quantify employer recruitment difficulties. Employers were asked whether any of the vacant positions reported in Section A had been vacant three months or longer while recruitment activities had been in progress. For these long-term vacancies, employers were requested to specify the number of full-time and part-time positions that had been vacant for three months or longer by occupation. In Part 2, employers were requested to list the occupations for which they anticipated recruitment difficulties in the next year and the reasons for the anticipated staffing difficulty.

In all, there were 140 occupational categories included in the survey. These occupations were defined by a number of different criteria including duties performed, education or training, and, for the occupations with licensing or certification requirements, registration with the appropriate governing body. Some notable occupational groups, such as physicians, dentists, chiropractors, optometrists, and podiatrists, which collect registration data through their own professional associations, were not included in the survey.

Instructions for completing the survey were given on the first page of the survey form. Employers were instructed to apply the following definitions when completing the survey:

Persons Employed: all individuals employed by your organization on a regular full-time or part-time basis

Full-Time: thirty hours or more per week

Part-Time: less than thirty hours per week

Vacancies: unfilled positions for which personnel are actively being recruited as of March 31, 1991.

Resignations: individuals who terminated employment during the one year period from April 1, 1990 to March 31, 1991. Do not include persons who have been promoted or transferred.

Casual, Temporary, Contract, or Relief Personnel: individuals who worked on-call, relief, or on a temporary basis and did not fill a regular full-time and/or part-time position. These individuals were paid directly through your organization or through an outside agency.

3. Survey Response Rates

The survey of health and social service personnel working in Alberta was mailed to 5,373 employers. A total of 5,296 of these employers responded, resulting in an overall response rate of 98.6 percent.

Table 1 provides a summary of the response rate for each employer group surveyed. Response rates to the survey were excellent. Response rates of 100 percent were achieved for hospitals and nursing homes, which represent two of the largest employers of health and social service personnel included in the survey. The majority of the other employers attained response rates of between 97.0 and 100 percent. Somewhat lower response rates were observed for day care centres and health unit offices.

A response failure by an employer will lower the figures for the total number of personnel reported in the survey data. However, Appendix 1 indicates that, for most of the groups surveyed, the effect of employer non-response on overall population figures was minimal. In total, the table estimates that only 1.0 percent or 841 of permanent health and social service personnel were unreported due to survey non-response. The three employer groups which had notable percentages of unreported permanent personnel were day care centres (4.0%), medical clinics (4.0%), and community agencies (3.2%).

TABLE 1. SURVEY RESPONSE RATE BY EMPLOYER GROUP
MARCH 31, 1991

EMPLOYER GROUP	NUMBER OF EMPLOYERS RESPONDING	NUMBER OF EMPLOYERS CONTACTED	RESPONSE RATE (%)
AADAC*	36	36	100.0
ALBERTA FAMILY & SOC. SERVICES	87	87	100.0
ALBERTA HEALTH	70	70	100.0
AMBULANCE OPERATORS	117	117	100.0
COMMUNITY AGENCIES	297	305	97.4
CORRECTIONAL CENTRES	64	64	100.0
DAYCARE CENTRES	638	661	96.5
DENTAL LABORATORIES	98	99	99.0
DENTISTS' OFFICES	884	895	98.8
DENTURE CLINICS	157	158	99.4
FCSS**	171	174	98.3
GROUP HOMES	89	91	97.8
HEALTH UNIT OFFICES	109	113	96.5
HOSPITALS/NURSING HOMES	256	256	100.0
HW CANADA/INDIAN AFFAIRS	42	42	100.0
MEDICAL CLINICS	284	290	97.9
MEDICAL LABORATORIES	142	144	98.6
OPHTHALMIC DISPENSERS	187	189	98.9
OPHTHALMOLOGISTS	63	63	100.0
OPTOMETRISTS	157	159	98.7
PHARMACIES	666	671	99.3
PRIVATE PHYSIOTHERAPISTS	142	143	99.3
POST-SECONDARY INSTITUTIONS	19	19	100.0
PRIVATE INDUSTRY	102	104	98.1
PSYCHOLOGISTS	320	324	98.8
SCHOOL BOARDS	99	99	100.0
TOTALS	5,296	5,373	98.6

* AADAC (Alberta Alcohol and Drug Abuse Commission).
** FCSS (Family and Community Support Services).

4. Employer Groups

Table 2 provides a summary of permanent personnel, casual personnel, vacancy rates, and turnover rates by employer group from 1990 to 1991. Employers reported a marginal increase of 0.5 percent in the number of permanent personnel. The total number of casual full-time equivalent positions during March decreased by 682 (17.6%) from 1990 to 1991.

The general decline in the number of full-time personnel (2.6%) and the substantial increase in the number of part-time personnel (6.6%) was one of the major changes occurring among permanent personnel from 1990 to 1991.[5] The percentage of permanent personnel employed part-time increased from 33.7 percent (1990) to 35.8 percent (1991).

Employers reported a consistent and substantial decline in vacancy rates from 1990 (4.0%) to 1991 (2.6%). The overall turnover rate decreased slightly from 14.5 percent (1990) to 13.3 percent (1991).

There was considerable variation in the growth of permanent personnel, casual personnel, vacancy rates, and turnover rates from 1990 to 1991 between different employment sectors. Some of the workforce changes occurring within specific employer groups are highlighted below.

Acute care hospitals accounted for a large proportion of the decline in the number of full-time permanent personnel in the 1991 survey. Overall, the number of full-time permanent personnel employed in acute care institutions decreased by 1,653 (10.2%), while the number of part-time personnel increased by 271 (2.8%). As a consequence, the percentage of permanent personnel employed part-time increased substantially from 37.8 percent (1990) to 41.0 percent (1991). The number of casual full-time equivalent personnel employed by acute care hospitals in March declined by 3.8 percent from 1990 to 1991. Even with this decline, acute care institutions continued to account for a large proportion, 49.0 percent, of all the full-time equivalent casual/contract positions reported by employers in 1991. Acute care hospitals also reported significant declines from 1990 to 1991 in both the overall vacancy rate (4.6% to 1.9%) and turnover rate (12.3% to 9.0%).

Auxiliary hospitals reported a modest increase of 1.6 percent in the number of permanent personnel from 1990 to 1991. All of the increase in permanent personnel was due to the rise in the number of part-time personnel (12.8%). The number of full-time personnel declined by 269 (9.5%). The number of casual full-time equivalent positions reported during March from 1990 to 1991 increased slightly (2.2%). The total vacancy rate declined from 3.1 percent in 1990 to 2.0 percent in 1991. Very little change was observed in the turnover rate in auxiliary hospitals from 1990 (11.0%) to 1991 (11.2%).

Nursing homes reported a comparatively large increase of 6.1 percent in the total number of permanent personnel employed from 1990 to 1991. Increases were seen in both the number of part-time personnel (9.0%) and full-time personnel (2.7%). In addition to the growth in the number of permanent personnel, there was a sizeable increase of 31.3 percent in the number of casual full-time equivalent positions filled during March from 1990 (208 FTEs) to 1991 (273 FTEs). Like other facilities, the vacancy rate in nursing homes showed a notable decline from 2.4 percent (1990) to 1.1 percent (1991). The overall turnover rate decreased considerably from 20.0 percent (1990) to 15.2 percent (1991).

Health units experienced a small increase of 2.8 percent in the total number of permanent personnel from 1990 to 1991. Unlike many other health employers, the rise in the number of permanent personnel was due entirely to an increase in the number of full-time personnel (7.0%). The proportion of permanent personnel employed part-time decreased from 39.9 percent (1990) to 37.4 percent (1991). The number of casual full-time equivalent positions filled during March increased slightly by 3 FTEs from 1990 to 1991. The overall vacancy rate declined from 3.1 percent (1990) to 2.6 percent (1991). The total turnover rate showed a sharp increase from 1990 (6.9%) to 1991 (13.4%). A large proportion of this turnover increase was due to the under-reporting of resignations by some health units in 1990.

Dental laboratories/clinics/offices reported an increase of 4.7 percent in the number of permanent personnel from 1990 to 1991. Similar to other employers, the increase in the number of part-time personnel (8.0%) was much greater than the increase in the number of full-time personnel (3.6%). However, the overall percentage of part-time showed very little change from 1990 (24.5%) to 1991 (25.3%). The number of casual FTEs reported for the month of March declined by 9 FTEs from 1990 to 1991. The vacancy rate dropped from 5.7 percent (1990) to 4.5 percent (1991). The turnover rate also declined from 15.9 percent (1990) to 12.2 percent (1991).

Medical laboratories/ clinics reported an increase of 3.6 percent in the number of permanent personnel employed from 1990 to 1991[6]. Again, the increase in the number of

[5] Approximately 2.0 percent of the total increase in part-time personnel is due to the addition of some private contracting agencies of home care personnel to the 1991 survey.

[6] The 3.6 percentage increase in the number of permanent personnel employed by medical clinics and laboratories is likely somewhat of an under-estimate due to the under-reporting of permanent personnel resulting from survey non-response (See Appendix 1).

TABLE 2. NUMBER AND PERCENT PART-TIME PERMANENT PERSONNEL, PERMANENT FULL-TIME EQUIVALENTS (FTEs), CASUAL FULL-TIME EQUIVALENTS (FTEs), VACANCY RATES, AND TURNOVER RATES, BY EMPLOYER GROUP, MARCH 31, 1990 and 1991

EMPLOYER GROUPS	TOTAL PERMANENT PERSONNEL		PERCENT PART-TIME		PERMANENT FTEs+		CASUAL FTEs+		VACANCY RATE (%)		TURNOVER RATE (%)	
	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991
ALL EMPLOYERS COMBINED	85,880	86,335	33.7	35.8	74,372	72,818	3,885	*3,203	4.0	2.6	14.5	13.3
Ambulance Operators	2,348	2,269	57.0	53.0	1,780	1,770	n/a	n/a	5.7	5.8	9.0	8.9
Community Agencies++	9,136	++10,267	32.9	++36.0	7,933	++8,652	390	++708	3.8	2.7	18.8	18.8
Community Pharmacies	2,763	2,638	39.8	38.0	2,299	2,202	90	41	3.7	2.9	8.3	12.6
Correctional Inst.	2,554	2,296	5.5	4.4	2,541	2,315	71	53	2.2	3.0	5.3	4.5
Day Care Centres	6,533	***6,216	17.3	18.7	6,162	5,795	n/a	418	3.2	2.8	37.9	36.2
Dental Labs/Clinics/Offices	5,157	5,400	24.5	25.3	4,799	4,940	64	55	5.7	4.5	15.9	12.2
Eye Care Offices	1,693	1,616	23.6	23.9	1,553	1,450	7	5	3.8	1.9	13.8	19.8
Government Dept.+++	5,226	5,584	6.2	5.4	5,289	5,666	370	180	4.2	4.1	6.7	6.6
HW Canada/Indian Affairs	431	469	8.6	7.5	433	464	30	6	4.7	2.6	14.1	1.8
Health Units	3,151	3,238	39.9	37.4	2,605	2,704	109	112	3.1	2.6	**6.9	13.4
Hospitals, Acute Care	26,012	24,630	37.8	41.0	22,105	19,959	1,630	1,568	4.6	1.9	12.3	9.0
Hospitals, Auxiliary	5,660	5,753	50.0	55.5	4,381	4,243	404	413	3.1	2.0	11.0	11.2
Hospitals, Psychiatric	1,277	1,099	11.8	19.2	1,309	1,077	263	54	8.2	7.7	11.4	11.1
Industrial/Occ. Health Firms	621	684	39.9	47.4	525	538	39	25	5.3	3.0	8.2	14.1
Medical Labs/Clinics	4,779	4,953	40.6	43.5	3,884	3,929	154	46	1.9	1.4	13.0	12.7
Nursing Homes	4,845	5,139	53.4	54.8	3,641	3,772	208	273	2.4	1.1	20.0	15.2
Post-Secondary Inst.	1,105	1,216	25.9	28.6	1,002	1,069	n/a	11	3.9	2.5	2.9	3.1
Private Physiotherapists	747	819	36.4	38.6	670	689	24	10	8.7	4.1	25.8	15.1
Private Psychologists	732	775	56.1	56.3	547	564	18	5	3.7	1.2	4.7	3.3
School Boards	1,110	1,274	38.6	41.5	919	1,026	14	22	2.4	1.6	1.6	7.7

\+ Permanent FTEs= (# full-time positions + # part-time positions/2) + (# full-time vacant positions + # part-time vacant positions/2)
Casual FTEs= # casual hours worked during month of March/120, where 120 is equal to the number of full-time hours worked during the month based on a 30 hour work week.

++ Community agencies include community agencies, groups homes, FCSS, AADAC, and health and social personnel employed by Indian Bands.There were a number of organizations added to the 1991 employer list for community agencies. A good proportion of the growth in permanent and casual personnel, as well as the increase in the percentage of part-time personnel, was due to the addition of these employers.

+++ Government departments include Alberta Family and Social Services and Alberta Health.

n/a These employers were not requested to supply information on casual personnel.

* To allow for comparisons from 1990 to 1991, the 373 casual full-time equivalent positions reported by the private contract agencies of home care personnel who were added for the first time in the 1991 survey have been excluded from the total count of casual FTEs. Casual FTEs reported by day care centres and post-secondary institutions, which were also counted for the first time in 1991, were also excluded.

** The turnover rate in 1990 was artificially low due to the under-reporting of resignations by some health units.

*** Appendix 1 estimates that there were 259 unreported permanent day care personnel due to survey non-response.

permanent personnel was due entirely to the rise in the number of part-time personnel (11.2%). The number of full-time personnel declined by 1.5 percent. Medical laboratories/clinics reported a substantial decline in the number of casual full-time equivalent positions filled in March from 1990 (154 FTEs) to 1991 (46 FTEs). Both the 1991 vacancy rate (1.4%) and the 1991 turnover rate (12.7%) showed a slight decline from 1990.

Government departments[7] reported an increase of 6.9 percent in the number of permanent personnel from 1990 to 1991, due entirely to a rise in the number of full-time personnel (7.7%). The proportion of permanent personnel employed part-time decreased from 6.2 percent to 5.4 percent. The increase in the number of permanent personnel was offset by a significant decline of 51.4 percent in the number of casual FTEs employed in March from 1990 (370 FTEs) to 1991 (180 FTEs). There was virtually no change in either the 1991 vacancy rate (4.1%) or turnover rate (6.6%) from 1990.

Day care centres reported an overall decline of 4.9 percent in the number of permanent personnel from 1990 to 1991. Some of this decline was likely due to unreported permanent personnel which resulted from the non-response of some day care centres to the 1991 employer survey (see Appendix 1). Day care centres reported a slight vacancy rate decline from 3.2 percent (1990) to 2.8 percent (1991). The turnover rate in day care centres continued to be exceptionally high in 1990 (37.9%) and 1991 (36.2%).

5. Permanent Personnel

5.1 Permanent Personnel By Occupational Category

Appendix 2 provides a detailed description of the number of full-time and part-time personnel in 1991, as well as the corresponding number of full-time equivalent positions for each occupation. Table 3 gives a comparative summary of the number of full-time and part-time permanent personnel and the percent change in permanent personnel by occupational group from 1990 to 1991.

The total number of permanent personnel in all health and social service occupations increased marginally by 0.5 percent from 1990 to 1991. Overall, there was a substantial increase in the number of permanent personnel employed part-time (6.6%) and a decrease in the number employed full-time (2.6%). This trend was the general pattern observed for many of the occupations included in the survey.

The total number of employed **registered nurses** declined by 2.9 percent from 1990 to 1991. There was a substantial decline in the number of registered nurses employed full-time (9.8%), which was partly offset by a increase in the number of part-time registered nurses (6.8%). Some of the nursing specialties which experienced large percentage decreases in the total number of permanent personnel included intravenous therapy (47.1%), nursing administration (22.7%), nursing education (18.7%), and out-patient services (16.6%).

There was a very slight increase (0.2%) in the number of **non-RN nursing personnel** employed from 1990 to 1991. Like many other occupational groups, non-RN nursing personnel experienced an overall decline in the number of full-time personnel (6.0%) and an increase in the number of part-time personnel (7.7%). Most of the growth in the number of non-RN nursing personnel was due to the substantial increase in the number of 'other nursing' staff[8] employed part-time (14.6%). The total number of licensed practical nurses, in contrast, declined by 11.5 percent from 1990 to 1991.

The number of personnel employed in **diagnostic/therapeutic** occupations declined by 7.2 percent from 1990 to 1991. A decrease was seen both in the number of full-time personnel (9.9%) and in the number of part-time (0.7%). Within this occupational category, substantial declines in the number of permanent personnel were observed for electrocardiograph (ECG) technicians (19.4%), respiratory therapists (12.7%), combined laboratory and x-ray technicians (11.5%), and medical laboratory technologists (6.0%). One of the few laboratory/diagnostic occupations to show an increase in the number of permanent personnel was radiation therapists (13.0%).

The total number of personnel working in **rehabilitation occupations** increased by 3.3 percent from 1990 to 1991. Overall, the number of rehabilitation personnel working full-time decreased slightly (0.9%), while the number of part-time personnel increased substantially (14.0%). There were small increases in the number of occupational therapists (1.5%) and physical therapists (1.3%) employed in 1991, due primarily to a rise in the number of part-time personnel. The number of speech-language pathologists showed substantial increases in both the number of full-time (12.4%) and part-time personnel (30.3%). A proportion of this increase, however, may be due to the double counting of speech-language pathologists between health units and school

[7] Government departments include Alberta Family & Social Services and Alberta Health.

[8] 'Other nursing' staff includes nursing aides, nursing attendants, mental deficiency nurses, and any nursing staff who are NOT registered nurses, graduate nurses, psychiatric nurses, licensed practical nurses, porters, or unit ward clerks but work in direct care.

TABLE 3. NUMBER AND PERCENT CHANGE OF FULL-TIME AND PART-TIME PERMANENT PERSONNEL, BY OCCUPATIONAL GROUP, MARCH 31, 1990 AND 1991

OCCUPATIONAL GROUP*	TOTAL PERSONNEL 1990	TOTAL PERSONNEL 1991	% CHANGE TOTAL PERSONNEL	FULL-TIME 1990	FULL-TIME 1991	% CHANGE FULL-TIME	PART-TIME 1990	PART-TIME 1991	% CHANGE PART-TIME
TOTAL	85,880	86,335	0.5	56,903	55,443	-2.6	28,977	30,892	6.6
AMBULANCE PERSONNEL (PAID AND VOLUNTEER)	2,234	2,310	3.4	1,019	1,141	12.0	1,215	1,169	-3.8
CHILD/YOUTH CARE PERSONNEL	1,795	1,861	3.7	1,423	1,469	3.2	372	392	5.4
DAY CARE PERSONNEL**	6,570	6,262	-4.7	5,416	5,076	-6.3	1,154	1,186	2.8
CORRECTIONAL PERSONNEL	1,997	1,800	-9.9	1,907	1,739	-8.8	90	61	-32.2
DENTAL PERSONNEL	3,954	4,067	2.9	3,013	3,072	2.0	941	995	5.7
DIETARY PERSONNEL	4,393	4,249	-3.3	2,159	2,027	-6.1	2,234	2,222	-0.5
EYE CARE PERSONNEL	1,229	1,203	-2.1	978	947	-3.2	251	256	2.0
HEALTH RECORDS PERSONNEL	909	862	-5.2	651	608	-6.6	258	254	-1.6
HOME CARE PERSONNEL***	2,013	2,496	24.0	440	542	23.2	1,573	1,954	24.2
DIAGNOSTIC/THERAPEUTIC PERSONNEL	6,098	5,691	-7.2	4,294	3,898	-9.9	1,804	1,793	-0.7
REGISTERED NURSE PERSONNEL	19,152	18,601	-2.9	11,181	10,084	-9.8	7,971	8,517	6.8
NURSING PERSONNEL (NON-RN)	11,095	11,112	0.2	6,124	5,759	-6.0	4,971	5,353	7.7
OCCUPATIONAL HEALTH PERSONNEL	116	136	17.2	110	110	0.0	6	26	333.3
PHARMACEUTICAL PERSONNEL	2,982	2,972	-0.3	1,923	1,909	-0.7	1,059	1,063	0.4
PSYCHOLOGICAL PERSONNEL	1,675	1,796	7.2	1,059	1,103	4.2	616	693	12.5
PUBLIC HEALTH PERSONNEL	257	282	9.7	236	262	11.0	21	20	-4.8
REHABILITATION PERSONNEL	6,686	6,904	3.3	4,828	4,785	-0.9	1,858	2,119	14.0
SOCIAL WORK/SERVICE PERSONNEL	3,348	3,560	6.3	2,966	3,143	6.0	382	417	9.2
PROGRAM ADMIN/CLERICAL SUPPORT	8,899	9,926	11.5	6,830	7,602	11.3	2,069	2,324	12.3
OTHER HEALTH CARE/SERVICE PERSONNEL	478	245	-48.7	346	167	-51.7	132	78	-40.9

*See Appendix 2 for a full description of the occupations included within each occupational group.
**The decrease in the number of day care personnel is due in part to the unreported permanent personnel that resulted from the non-response of some day care centres to the 1991 employer survey (see Appendix 1).
***A good proportion of the growth in home care personnel is due to the new addition of some private contracting agencies of home care personnel to the 1991 survey.

boards.[9] Decreases were seen in the number of assistants/aides working in occupational therapy (1.9%), physical therapy (6.2%), and speech-language pathology (5.7%). These declines in the number of assistants/aides contrast sharply to the substantial growth seen for these occupations in 1990.

Dental personnel increased in number by 2.9 percent from 1990 to 1991. Dental assistants certified with intra-oral training increased in number by 7.4 percent while declines were reported in both the number of dental assistants employed with on-the-job training (2.5%) and those without intra-oral certification (14.5%). The total number of dental hygienists increased by 6.5 percent and unlike many other occupational groups, all of this increase was due to a rise in the number of full-time personnel (14.0%). Registered dental technicians also experienced a substantial increase (19.5%) in the number of permanent personnel employed from 1990 to 1991.

Day care personnel declined in number by 4.7 percent from 1990 to 1991. Some of this decrease was due to the unreported permanent personnel which resulted from the non-response of some day care centres to the 1991 survey (see Appendix 1). There were some notable changes from 1990 to 1991 in the educational qualifications of some day care personnel. The number of day care directors who had a baccalaureate degree in child education as their major qualification increased by a substantial 30.2 percent. Among day care workers, there was an increase in the number who had a baccalaureate degree in child education (31.1%) and in the number who had a certificate in child education (27.5%).

Occupational health personnel increased in number by 17.2 percent from 1990 to 1991. All of this increase was due to the substantial rise (39.0%) in the number of occupational hygiene technologists employed from 1990 to 1991. Part of this increase may be due to the revision of the 1991 mailing list for employers of occupational hygiene technologists.

The number of permanent personnel employed in **social work/service occupations** increased by 6.3 percent from 1990 to 1991. The most substantial growth within this occupational category was observed for alcoholism/addiction counsellors, who increased in number by 32.4 percent.

All of the growth seen for **public health personnel** from 1990 to 1991 was due to the increase in the number of community health representatives/workers (24.4%).[10] The number of public health inspectors, in contrast, declined by 5.6 percent.

Figure 1 provides an illustration of the growth in permanent personnel from 1990 to 1991 for selected health and social service occupations.

5.2 Percent Part-Time

The total proportion of health and social service personnel employed part-time increased substantially from 33.7 percent in 1990 to 35.8 percent in 1991. The increase in the percentage of part-time permanent personnel was a consistent pattern observed for many of the occupations included in the survey. Some of the occupations which had notable changes in the percentage of part-time personnel are highlighted in figure 2.

Registered nurses experienced one of the largest increases in the percentage of part-time personnel from 1990 (41.6%) to 1991 (45.8%). Among licensed practical nurses, the percentage of part-time increased from 46.5 percent to 50.4 percent and among 'other nursing' staff, the proportion rose from 47.2 percent to 51.3 percent.

Notable increases in the proportion of part-time personnel were also seen for the rehabilitation occupations, where the total percentage of part-time rose from 27.8 percent (1990) to 30.7 percent (1991). Some of the most substantial increases in the percentage of part-time personnel occurred for occupational therapists (31.0% to 35.0%) and for speech-language pathologists (23.9% to 26.7%).

Other comparatively high percentages of part-time personnel continued in 1991 for home care personnel (78.3%), dietary personnel (52.3%), dental hygienists (48.0%), electroencephalograph (EEG) technologists (47.5%), and combined laboratory and x-ray technicians (46.9%).

Relatively low percentages of part-time personnel continued in 1991 for correctional service personnel (3.4%), registered dental technicians (4.0%), public health personnel (7.1%), certified denturists (7.8%), certified ophthalmic dispensers (8.6%), and social work/service personnel (11.7%).

Table 4 provides a summary of the distribution of part-time personnel across large urban, small urban, large town, and rural settings for selected occupations which had comparatively high levels of part-time personnel in 1991. For most of the occupations presented in the table, the percentage of part-time personnel was lower in urban

[9] Speech-language pathologists working in school settings may be employed by health units, by school boards, or through some contract funding arrangement between these two employers.

[10] Community health representative/workers provide health education and advice primarily to native communities. Included in this occupational category are graduates of the certificate program at Alberta Vocational Centre, Lac La Biche.

Figure 1.

Number of Permanent Personnel Within Selected Health and Social Service Occupations

March 31, 1990 and 1991

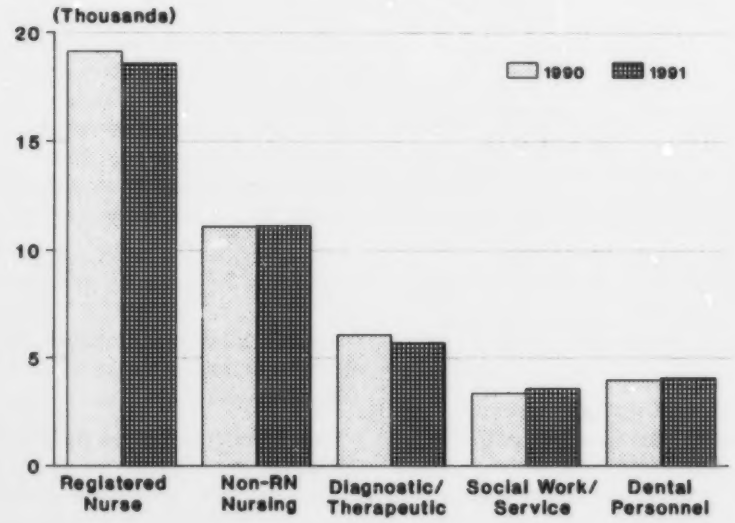


Figure 2.

Percent Part-time Personnel Within Selected Health and Social Service Occupations

March 31, 1990 and 1991

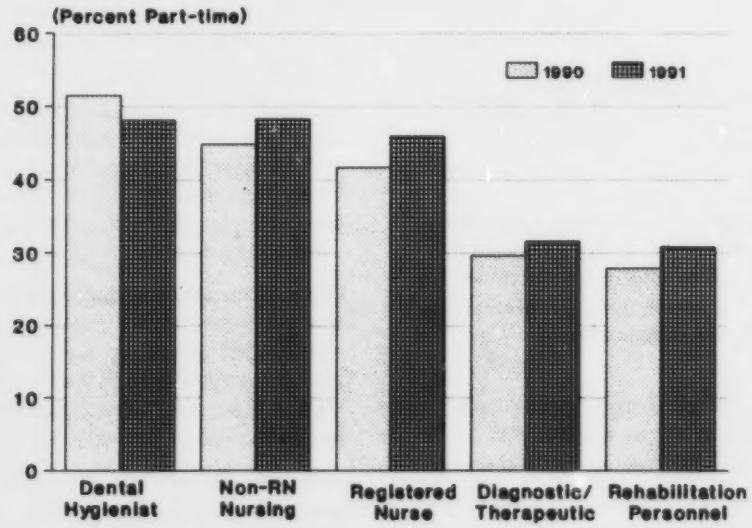


TABLE 4. PERCENT PART-TIME PERSONNEL FOR SELECTED OCCUPATIONS IN LARGE URBAN, SMALL URBAN, LARGE TOWNS, AND RURAL AREAS* MARCH 31, 1991

OCCUPATION	PERCENT PART-TIME (%)			
	LARGE URBAN	SMALL URBAN	LARGE TOWN	RURAL AREA
ALL OCCUPATIONS+	34.3	30.7	40.0	45.5
Dental Hygienists	45.1	60.2	63.0	48.7
Home Care Personnel	75.7	67.8	94.7	82.2
Registered Nurses	44.7	44.5	52.2	50.1
Licensed Practical Nurses	46.4	45.3	59.4	57.8
'Other' Nursing Personnel++	47.8	52.7	52.1	61.3
Occupational Therapists	31.3	30.0	33.3	84.8
Physical Therapists	32.5	29.8	41.0	59.0
Speech Therapists	28.2	28.6	24.3	13.3

* Large urban, small urban, large towns, and rural areas were defined in terms of the following population figures: LARGE URBAN--population > 70,000 (includes Edmonton (CMA) and Calgary (CMA)); SMALL URBAN--10,000 < population < 70,000; LARGE TOWN--5,000 < population < 10,000; and RURAL AREA--population < 5,000.

\+ All Occupations represents the total percent part-time for all occupations included in the survey.

++ 'Other' Nursing Personnel includes nursing aides, nursing attendants, mental deficiency nurses, and any other nursing staff who are NOT registered nurses, graduate nurses, psychiatric nurses, nursing assistants, porters, or unit ward clerks but work in direct care.

centres and higher in rural areas. This was particularly the case for occupational therapists where the percentage of part-time was 31.3 percent in large urban areas compared to 84.8 percent in rural areas.

A comparison of the percentage of part-time employment in urban and rural areas from 1990 to 1991 indicates that most of the growth in part-time personnel occurred in large urban centres. From 1990 to 1991, the total proportion of part-time workers in large urban centres increased from 31.3 percent to 34.3 percent, while in rural areas the total proportion of part-time personnel declined slightly from 45.9 percent to 45.5 percent.

5.3 Permanent Personnel Per 10,000 Population Ratios

The 0.5 percent growth in permanent health and social service personnel from 1990 to 1991 was less than the 2.0 percent population growth occurring from June 1, 1990 to June 1, 1991.[11] Table 5 gives a summary of the number of permanent personnel per 10,000 Alberta population for 1990 and 1991. This table expresses the number of health and social service personnel who are employed on a permanent basis as a proportion of the total Alberta population.[12] The ratios do not take into consideration a number of important factors including the demand for health and social service personnel, the percentage of part-time permanent personnel, or the number of casual personnel. For this reason, annual increases or decreases in total permanent personnel per 10,000 population ratios should not be taken as indicators of personnel 'surpluses' or 'shortages'. Personnel per population ratios can best be viewed as a descriptive device for informed discussion.

Table 5 indicates that the total number of permanent health and social service personnel declined by 5.07 per 10,000 Alberta population. This decline contrasts to the substantial increase in the total number of personnel per 10,000 population ratio observed in the year prior (16.50).

The largest declines in the number of personnel per 10,000 population in 1991 were seen for registered nurses (3.72) and for diagnostic/therapeutic personnel (2.10). Small, but notable, increases in the number of personnel per 10,000 population occurred for social work/service personnel (.57), psychological personnel (.35), and rehabilitation personnel (.33).

[11] Source: *Alberta Population Growth, Second Quarter, 1991*. Revised June 1, 1990 and June 1, 1991 population estimates.

[12] Personnel per population ratios were calculated by dividing the total number of permanent personnel within each occupational group by the estimated Alberta population for that year and then multiplying by 10,000.

5.4 Annual Workforce Data On Permanent Personnel, 1987 to 1991

The total number of permanent personnel increased by 12.0 percent over a five year period from 1987 to 1991.[13] Most of the growth in the number of permanent personnel occurred during the years from 1987 to 1990. In the last year, from 1990 to 1991, the increase in the number permanent personnel was marginal (0.5%).

There were many health and social service occupations which experienced substantial growth in the number of permanent personnel from 1987 to 1991. Figure 3 displays the total percentage increase in the number of permanent personnel from 1987 to 1991 for selected occupations which had particularly high growth rates.

The number of personnel employed in dental occupations increased by a total of 21.0 percent from 3,361 (1987) to 4,067 (1991). Among dental assistants, there was a consistent increase from 1987 to 1991 in the number of dental assistants certified with intra-oral training (33.3%) and notable declines both in the number of dental assistants certified without intra-oral training (9.3%) and those with on the job training (4.2%). The number of dental hygienists showed an substantial increase of 28.8 percent from 645 (1987) to 831 (1991).

Diagnostic/therapeutic occupations increased in number by a total of 12.1 percent 1987 to 1991. Like many other occupations, most of the growth for diagnostic/therapeutic personnel occurred from 1987 to 1990. In 1991, the number of personnel employed in these occupations declined (7.2%). Over the five year period from 1987 to 1991, considerable increases in the number of permanent personnel occurred for diagnostic medical sonographers (49.0%), respiratory therapists (41.0%), nuclear medicine technologists (27.5%), and medical laboratory technologists (13.6%).

The number of registered nurses increased by 12.1 percent from 1987 to 1991. Again, all of the growth in the number of registered nurses occurred from 1987 to 1990. From 1990 to 1991, the number of registered nurses declined (2.9%). The number of non-RN nursing personnel employed from 1987 to 1991 showed a comparatively small total percentage increase of only 2.4 percent.

There were some substantial increases in the number of rehabilitation personnel from 1987 to 1991. During this time period, there were fairly consistent increases in the number of occupational therapists (35.6%) and physical

[13] Day care personnel, who were added for the first time in the 1988 employer survey, were excluded from the calculation of total percentage growth from 1987 to 1991.

TABLE 5. NUMBER OF PERMANENT PERSONNEL BY OCCUPATION, 1991
AND NUMBER OF PERMANENT PERSONNEL BY OCCUPATION
PER 10,000 POPULATION RATIOS, 1990 AND 1991

OCCUPATIONAL GROUP	1991 PERSONNEL	PERSONNEL TO POP'91 RATIO*	PERSONNEL TO POP'90 RATIO**	PERSONNEL TO POP RATIO CHANGE***
AMBULANCE PERSONNEL (Paid and Volunteer)	2,310	9.16	9.04	0.12
CHILD/YOUTH CARE PERSONNEL	1,861	7.38	7.26	0.12
DAY CARE PERSONNEL+	6,262	24.83	26.58	-1.75
CORRECTIONAL PERSONNEL	1,800	7.14	8.08	-0.94
DENTAL PERSONNEL	4,067	16.13	16.00	0.13
DIETARY PERSONNEL	4,249	16.85	17.77	-0.92
EYE CARE PERSONNEL	1,203	4.77	4.97	-0.20
HEALTH RECORDS PERSONNEL	862	3.42	3.68	-0.26
HOME CARE PERSONNEL++	2,496	9.90	8.14	1.75
DIAGNOSTIC/THERAPEUTIC PERSONNEL	5,691	22.57	24.67	-2.10
REGISTERED NURSE PERSONNEL	18,601	73.77	77.49	-3.72
OTHER NURSING PERSONNEL (NON-RN)	11,112	44.07	44.89	-0.82
OCCUPATIONAL HEALTH PERSONNEL	136	0.54	0.47	0.07
PHARMACEUTICAL PERSONNEL	2,972	11.79	12.07	-0.28
PSYCHOLOGICAL PERSONNEL	1,796	7.12	6.78	0.35
PUBLIC HEALTH PERSONNEL	282	1.12	1.04	0.08
REHABILITATION PERSONNEL	6,904	27.38	27.05	0.33
SOCIAL WORK/SERVICE PERSONNEL	3,560	14.12	13.55	0.57
PROGRAM ADMIN/CLERICAL SUPPORT	9,926	39.37	36.01	3.36
OTHER HEALTH CARE/SERVICE PERSONNEL	245	0.97	1.93	-0.96
TOTAL	86,335	342.40	347.47	-5.07

*Personnel to population ratio = (1991 total permanent personnel/1991 Alberta populaton) X 10,000. Alberta population, June 1, 1991 = 2,521,500 (Source: "Alberta Population Growth, Second Quarter", 1991, Alberta Bureau of Statistics).

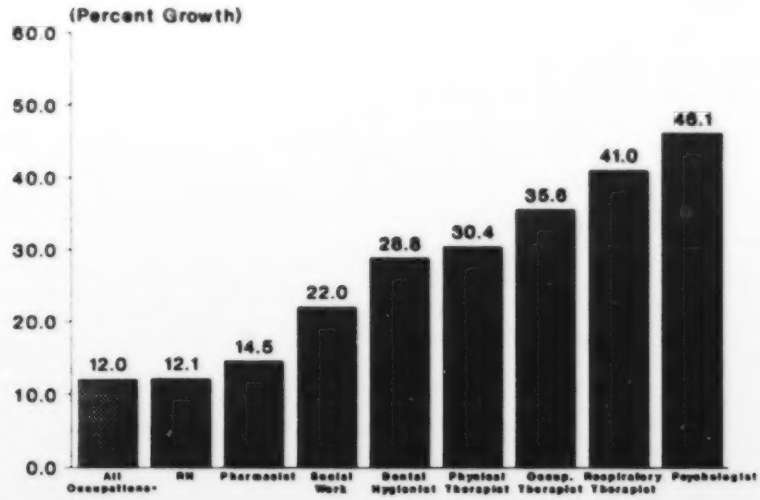
**Personnel to population ratio = (1990 total permanent personnel/1990 Alberta populaton) X 10,000. Alberta population, June 1, 1990 = 2,471,600 (Source: "Alberta Population Growth, Second Quarter", 1991, Alberta Bureau of Statistics). Note that the 1990 personnel to population ratios published in prior reports may differ slightly from the 1990 personnel/population ratios calculated in the table due to the revision of the Alberta June 1, 1990 total population estimate.

***Personnel population ratio change = (1991 personnel to population ratio) - (1990 personnel to population ratio).

+The decrease in the number of day care personnel is due in part to the unreported permanent personnel that resulted from the non-response of some day care centres to the 1991 survey (see Appendix 1).

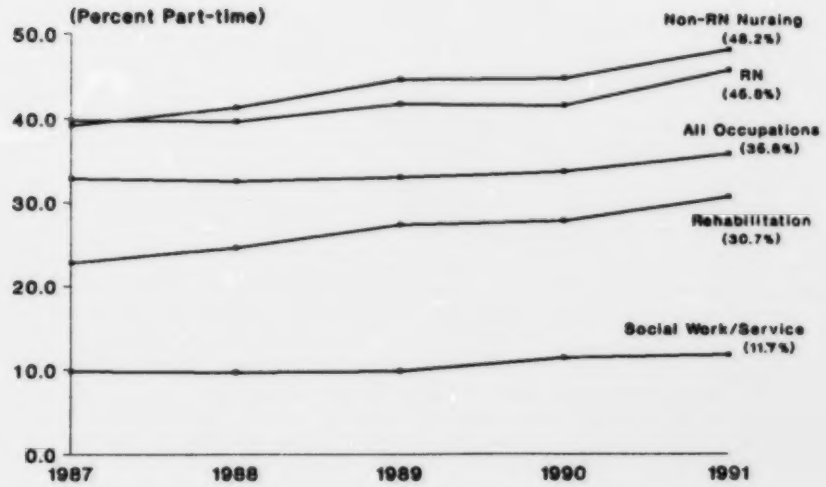
++A good proportion of the growth in home care personnel is due to the new addition of some private agencies of home care personnel to the 1991 survey.

Figure 3.
Total Percentage Growth in Permanent Personnel from 1987 to 1991
(March 31)



*All occupations does not include day care personnel.

Figure 4.
Percent Part-time Personnel from 1987 to 1991
(March 31)



therapists (30.4%).[14] Even greater increases from 1987 to 1991 occurred in the number of occupational therapy assistants/aides (60.6%) and speech-language pathologist assistants/aides (59.6%). The increase in the number of physical therapy assistants/aides employed from 1987 to 1991 was, in comparison, quite small (4.7%).

Social work/service personnel increased by a total of 22.0 percent from 1987 to 1991. Within this occupational category, the greatest growth from 1987 to 1991 was seen among those social workers who had a Master's degree in social work (23.9%), a Bachelor's degree in social work (22.9%), a social services diploma (63.3%), and among social service personnel specializing as alcoholism/addiction counsellors (50.5%).

Some of the other occupations which had notably high percentage growth rates from 1987 to 1991 included nutritionists (116.7%), psychologists (46.1%), certified ophthalmic dispensers (31.3%), child/youth care occupations (17.2%), and pharmacists (14.5%).

Figure 4 illustrates the growth in the percentage of part-time personnel from 1987 to 1991. For all occupations combined, the total proportion of part-time personnel increased from 32.9 percent (1987) to 35.8 percent (1991). Some of the occupations which experienced substantial increases in the percentage of part-time personnel from 1987 to 1991 included registered nurses (39.8 to 45.8%), non-RN nursing occupations (39.2% to 48.2%), rehabilitation occupations (22.8% to 30.7%), and diagnostic/therapeutic occupations (26.9% to 31.5%).

Notably low percentages of part-time staff from 1987 to 1991 were observed for correctional service personnel (3.1% to 3.4%), public health personnel (4.2% to 7.1%), and social work/service personnel (9.8% to 11.7%).

6. Casual/Contract/Temporary/Relief Personnel

Information on casual/contract personnel was collected from all employers except ambulance operators. Day care centres and post-secondary institutions, which had not been asked to supply information on casual/contract personnel in prior survey years, were requested to supply this data for the first time in 1991.

A total of 5,179 employers were asked to provide information on casual/contract personnel. Well over one-half (64.8%) of these employers reported that they did not hire casual/contract personnel during March, 1991. Only a small proportion (20.4%) of employers reported hiring casual/contract personnel during March, 1991. The remaining employers (14.8%) failed to respond to the question. There was very little change in the proportion of employers reporting casual/contract personnel from 1990 (20.1%) to 1991 (20.4%).

The employers reporting casual/contract personnel were asked to indicate the number of workers and the total number of hours accumulated within each occupational category. To encourage employer response, a number of occupational categories were listed on the form. A category for 'other' occupation(s) was also given, but it should be recognized that the structure of the question favoured responses to the occupations explicitly listed.[15]

Appendix 3 gives a detailed occupational summary of casual/contract personnel reported for March, 1991. The appendix indicates that a total of 11,810 casual/contract workers were employed during March and that each employee worked an average of 47.7 hours. The largest numbers of casual/contract workers were reported for registered nurses (4,983), licensed practical nurses (1,447), 'other' nursing staff (1,328), day care personnel (874), and home care personnel (611).

Appendix 3 also converts the total number of casual/contract hours reported to full-time equivalent workers (based on a 30 hour work week). Overall, the appendix indicates that a total of 4,005 full-time equivalent positions would be required to account for the total 480,635 casual/contract hours reported for March, 1991. The greatest number of casual/contract full-time equivalent positions would be required for registered nurses (1,371), licensed practical nurses (491), 'other' nursing staff (478), and day care personnel (418).

Table 6 provides a comparison of casual/contract data from 1990 to 1991 for the specific occupations that were listed on the survey form. Overall, table 6 indicates that the total number of casual/contract workers increased slightly, while there was a small decline in both the average number of hours worked and the number of full-time equivalent casual/contract positions. Fairly substantial drops in the number of casual/contract full-time equivalent positions occurred for pharmacists, physical therapists, and social workers. Small increases in the number of full-time equivalent casual/contract workers occurred for dietitians, licensed practical nurses, occupational therapists, psychologists, and speech-language pathologists.

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[14] The number of speech-language pathologists also increased by 16.3 percent from 1987 to 1991. Part of this increase, however, may be artificially inflated due to the double counting of speech-language pathologists between health units and school boards in 1991.

[15] The occupations explicitly listed on the survey form were registered nurses, licensed practical nurses, physical therapists, occupational therapists, psychologists, social workers, dietitians/nutritionists, pharmacists, speech-language pathologists, and dental hygienists.

TABLE 6. CASUAL/CONTRACT/TEMPORARY/RELIEF PERSONNEL EMPLOYED DURING THE MONTH OF MARCH 1990 AND 1991*

OCCUPATION	# CASUAL WORKERS		MEAN HOURS WORKED PER WORKER		CASUAL HOURS CONVERTED TO F-T WORKER**	
	1990	1991	1990	1991	1990	1991
TOTAL	6,932	7,164	44.8	43.5	2,214	2,113
Dental Hygienists	99	107	35.5	31.4	29	28
Dietitians	48	65	51.5	55.3	18	25
Licensed Practical Nurses	1,321	1,447	49.7	49.3	464	491
Occupational Therapists	62	64	22.3	35.8	9	15
Pharmacists	216	170	58.2	42.6	100	58
Physical Therapists	167	123	43.4	52.1	53	39
Psychologists	89	78	38.4	49.7	25	29
Registered Nurses	4,699	4,976	41.5	41.4	1,379	1,370
Social Workers	193	116	88.9	56.2	133	49
Speech-Language Pathologists	38	18	25.1	58.0	4	8

* Day care centres and post-secondary institutions were requested to supply information on casual/contract personnel for the first time in the 1991 survey. To allow for valid comparisons from 1990 to 1991, all casual/contract personnel reported by day cares and post-secondary institutions were excluded from the 1991 data.

** The total number of casual hours were converted to the equivalent number of workers working full-time for one month. In the computation, the total number of hours worked by casual personnel was divided by the monthly hours worked by one full-time worker (120 hours - based on a 30 hour week).

7. Vacancy Rates

The total number of vacant positions (full-time equivalent) for all health and social service occupations declined substantially from 2,980 (1990) to 1,929 (1991). The overall vacancy rate dropped considerably from 4.0 percent (1990) to 2.6 percent (1991). Most of the decline in vacancy rates was due to the decrease in the number of vacant full-time positions from 1990 (2,211) to 1991 (1,370).

7.1 Vacancy Rates By Occupational Category

Table 7 provides a comparative summary of vacancy rates and vacancy rate change from 1990 to 1991 for each occupational group. Vacancy rates declined for all occupational categories except correctional service occupations. The vacancy rates for the specific occupations included within each group are given in Appendix 2.

Registered nurses accounted for almost one-half (48.5%) of the decrease in the number of vacant positions reported in the 1991 survey. The total number of full-time equivalent vacant positions reported for registered nurses dropped from 794 (1990) to 284 (1991). The overall vacancy rate decreased dramatically from 5.0 percent (1990) to 1.9 percent (1991). Every nursing specialty experienced a decline in vacancy rates, with the most pronounced declines occurring for nursing positions in intensive care, medical/surgical, and long-term care/rehabilitation. Most of the decline in the number of vacant positions for registered nurses were for positions that were full-time; in 1990, there were 560 full-time vacant positions for registered nurses, while in 1991, there were only 175 full-time vacant positions.

The vacancy rate for **non-RN nursing personnel** declined from 2.9 percent (1990) to 1.5 percent (1991). The decrease in the vacancy rate for licensed practical nurses from 3.0 percent (1990) to 1.2 percent (1991) accounted for most of the drop in the number of vacant positions within this occupational group. The vacancy rate for 'other nursing' staff continued to be relatively low in 1990 (1.9%) and 1991 (1.4%).

As a group, the **rehabilitation occupations** experienced a notable decrease in vacancy rates from 6.4 percent (1990) to 4.5 percent (1991). Substantial declines in vacancy rates between 1990 and 1991 occurred for occupational therapists (14.9% to 9.6%), physical therapists (14.3% to 10.0%), and speech-language pathologists (13.8% to 5.9%). Comparatively low vacancy rates in 1991 were observed for the assistants/aides employed in occupational therapy (2.0%), physical therapy (0.2%), and speech-language pathology (3.1%). Other low vacancy rates in 1991 were seen for rehabilitation practitioners (1.9%) and recreational therapists (3.3%).

Diagnostic/therapeutic occupations had relatively low vacancy rates in both 1990 (2.8%) and 1991 (2.3%). Within this occupational group, there was a substantial vacancy rate increase for diagnostic medical sonographers from 1990 (3.9%) to 1991 (7.4%). The vacancy rate for clinical scientists (11.4%) and laboratory scientists (7.4%) was also comparatively high in 1991, although it should be noted that these vacancy rates were based on a small number (6) of full-time equivalent vacant positions. Respiratory therapists continued to have one of the higher vacancy rates (4.1%) among diagnostic/therapeutic personnel.

Over one half of the vacant positions reported for **dental occupations** were for dental hygienists (132). Dental hygienists had the highest vacancy rate, 16.2 percent, in the 1991 survey. The vacancy rate for dental assistants declined from 1990 (4.5%) to 1991 (2.4%). The majority of the vacant positions reported for dental assistants in 1991 were for assistants certified with intra-oral training (84).

The vacancy rate for **social work/service personnel** declined slightly from 1990 (4.1%) to 1991 (3.4%). The largest numbers of full-time equivalent vacant positions in 1991 were reported for social workers with either a bachelor's degree in social work (46), a master's degree in social work (21), or a social services diploma (17).

The vacancy rate for **home care personnel** showed a notable decline from 5.2 percent in 1990 to 2.9 percent in 1991. The number of full-time equivalent vacant positions for this occupational group decreased from 68 (1990) to 46 (1991).

The vacancy rate for **public health inspectors** continued to be relatively high in 1990 (6.9%) and 1991 (5.7%). The vacancy rate for community health representatives was relatively low in both 1990 (1.6%) and 1991 (2.2%).

The 5.7 percent vacancy rate for **ambulance personnel** shown in table 7 was due largely to the vacant positions reported for volunteer ambulance personnel. The vacancy rate for paid ambulance personnel was comparatively low (3.7%) in 1991.

7.2 Vacancy Rate By Large Urban, Small Urban, Large Town, and Rural Areas

Table 8 looks at the geographical distribution of vacancy rates for selected occupations across large urban, small urban, large town, and rural areas. As in 1990, the vacancy rates in 1991 were generally higher in rural areas compared to urban centres.

Table 8 indicates that for all occupations combined, the vacancy rate in large urban centres was 2.4 percent, compared to 3.9 percent in rural areas. Some particularly high rural vacancy rates in 1991 were seen for dental

TABLE 7. VACANCY RATES AND VACANCY RATE CHANGE
BY OCCUPATIONAL GROUP
MARCH 31, 1990 AND 1991

OCCUPATIONAL GROUPS	1991 FTE POSITIONS	1991 VACANT FTE POSITIONS	1991 VACANCY RATE (%)	1990 VACANCY RATE (%)	1990-1991 VACANCY RATE CHANGE*
AMBULANCE PERSONNEL (PAID AND VOLUNTEER)	1,829	104	5.7	5.8	-0.2
CHILD/YOUTH CARE PERSONNEL	1,722	57	3.3	3.8	-0.5
CORRECTIONAL PERSONNEL	1,830	60	3.3	2.3	1.0
DAY CARE PERSONNEL	5,830	161	2.8	3.2	-0.4
DENTAL PERSONNEL	3,775	205	5.4	7.1	-1.6
DIETARY PERSONNEL	3,191	53	1.7	2.5	-0.8
EYE CARE PERSONNEL	1,099	24	2.2	4.3	-2.1
HEALTH RECORDS PERSONNEL	749	14	1.8	2.7	-0.9
HOME CARE PERSONNEL	1,565	46	2.9	5.2	-2.3
DIAGNOSTIC/THERAPEUTIC PERSONNEL	4,909	114	2.3	2.8	-0.5
REGISTERED NURSE PERSONNEL	14,626	284	1.9	5.0	-3.0
NURSING PERSONNEL (NON-RN)	8,567	132	1.5	2.9	-1.4
OCCUPATIONAL HEALTH PERSONNEL	126	3	2.4	6.2	-3.8
PHARMACEUTICAL PERSONNEL	2,506	65	2.6	4.0	-1.4
PSYCHOLOGICAL PERSONNEL	1,489	39	2.6	4.0	-1.3
PUBLIC HEALTH PERSONNEL	283	11	3.7	4.3	-0.6
REHABILITATION PERSONNEL	6,118	273	4.5	6.4	-1.9
SOCIAL WORK/SERVICE PERSONNEL	3,469	117	3.4	4.1	-0.8
PROGRAM ADMIN/CLERICAL SUPPORT	8,927	163	1.8	2.0	-0.2
OTHER HEALTH CARE/SERVICE PERSONNEL	214	8	3.7	4.0	-0.2
TOTAL	72,818	1,929	2.6	4.0	-1.4

* VACANCY RATE CHANGE = 1991 vacancy rate - 1990 vacancy rate. The vacancy rate change calculated may not correspond exactly to the difference between the 1990 and 1991 vacancy rates presented in the table, due to the rounding of all figures.

TABLE 8. VACANCY RATES FOR SELECTED HEALTH AND SOCIAL SERVICE OCCUPATIONS BY LARGE URBAN, SMALL URBAN, LARGE TOWN, AND RURAL AREA+ MARCH 31, 1991

OCCUPATION	VACANCY RATE (%)			
	LARGE URBAN	SMALL URBAN	LARGE TOWN	RURAL AREAS
ALL OCCUPATIONS*	2.4	2.6	2.8	3.9
Ambulance Personnel (Paid)	2.2	2.4	3.2	7.9
Correctional Service Personnel	2.9	1.3	2.5	10.7
Dental Hygienists	12.8	25.1	30.0	28.9
Home Care Personnel**	4.5	0.9	0.3	1.2
Non-RN Nursing Personnel	1.6	1.9	2.2	0.6
Occupational Therapists	7.7	9.7	28.6	***13.6
Pharmacists	1.3	5.7	4.5	5.6
Physical Therapists	7.0	13.6	24.2	20.4
Psychologists	2.4	5.5	13.4	***9.7
Registered Nurses	1.8	1.7	1.6	3.1
Social Workers	2.0	4.0	2.6	11.9
Speech-Language Pathologists	1.2	11.1	9.7	22.2

+ Large urban, small urban, large towns, and rural areas were defined in terms of the following population figures: LARGE URBAN--population > 70,000 (includes Edmonton (CMA) and Calgary (CMA)); SMALL URBAN--10,000 < population < 70,000; LARGE TOWN--5,000 < population < 10,000; and RURAL AREA--population < 5,000.

* All Occupations includes all occupations measured in the 1991 survey.

** Home Care Personnel includes homemakers, homehelpers, and personal care attendants.

*** The rural vacancy rates for psychologists and occupational therapists were based on only three vacant full-time equivalent positions.

hygienists (28.9%), speech-language pathologists (22.2%), physical therapists (20.4%), occupational therapists (13.6%), social workers (11.9%), and correctional service personnel (10.7%).

Home care personnel was the only occupational group to show a higher vacancy rate in large urban centres (4.5%) compared to rural areas (1.2%).

Registered nurses were notable for having one of the lowest vacancy rates within each geographical area. The vacancy rates for registered nurses in large urban centres (1.8%), small urban centres (1.7%), large towns (1.6%), and rural areas (3.1%) were consistently below the vacancy rates seen for most other occupations in the same area.

Figure 5 provides an illustration of vacancy rates in large urban, small urban, large town, and rural areas for selected health and social service occupations.

7.3 Annual Vacancy Rates, 1987 To 1991

Growth in the total vacancy rate occurred from 1987 (2.4%) to 1988 (3.2%) and reached its highest level in 1989 (5.4%). The high vacancy rate in 1989 was followed by a substantial decline from 1990 (4.0%) to 1991 (2.6%). Figure 6 illustrates the general pattern of vacancy rate increases to 1989, followed by consistent declines in 1990 and 1991. This pattern of vacancy rate change was observed for many health and social service occupational groups.

The increase in vacancy rates from 1987 to 1989, followed by declines in 1990 and 1991, was quite pronounced for some occupational groups. Registered nurses, in particular, experienced a sharp increase in vacancy rates from 1987 (1.7%) to 1989 (8.2%), followed by a sharp vacancy rate decline in 1991 (1.9%). Rehabilitation personnel also showed vacancy rate increases from 1987 (4.4%) to 1989 (9.4%) followed by a substantial decrease in 1991 (4.5%). This same vacancy rate pattern, although less pronounced, occurred for child/youth care personnel, diagnostic/therapeutic personnel, non-RN nursing personnel, pharmacists, psychologists, and social work/service personnel.

Some occupations showed no general pattern in vacancy rate changes from 1987 to 1991. These occupations included ambulance personnel, correctional service personnel, dental personnel, eye care personnel, home care personnel, and public health personnel.

8. Turnover Rates

The total number of full-time equivalent resignations decreased from 10,759 (1990) to 9,664 (1991). The corresponding turnover rate for all health and social service occupations showed a small decline from 14.5 percent (1990) to 13.3 percent (1991). Appendix 2 provides a comprehensive summary of full-time equivalent resignations and turnover rates for each occupation surveyed.

8.1 Turnover Rates By Occupational Category

Table 9 highlights full-time equivalent resignations and turnover rate changes from 1990 to 1991 for each occupational group in the survey.

Day care personnel continued to have the highest turnover rate among all the health and social service occupations in 1990 (37.7%) and 1991 (36.0%). Over one half of the resignations in 1991 were by day care staff with no formal degree or diploma.

Child/youth care personnel also continued to have one of the highest turnover rates in 1991 (19.6%), although this rate declined significantly from 1990 (24.9%). Close to one third of the resignations within this occupational category were by workers with a child/youth care diploma.

Other particularly high turnover rates in 1991 were seen for **home care personnel** (18.8%) and **eye care personnel** (18.6%). Among eye care personnel, non-certified ophthalmic dispensers accounted for a large proportion (41.2%) of the full-time equivalent resignations.

Social work/service personnel had one of the largest increases in turnover rates from 1990 (9.1%) to 1991 (12.0%). The greatest turnover rate increases from 1990 to 1991 occurred for social workers with a related master's degree (9.5% to 22.9%) and for social workers with a social services diploma (8.9% to 14.3%).

The turnover rate for personnel in the **dental occupations** declined from 15.8 percent (1990) to 12.8 percent (1991). Most of the decline was due to the decrease in turnover rates from 1990 to 1991 among dental assistants (18.0% to 13.6%) and dental hygienists (13.9% to 11.0%).

There was very little change observed in the turnover rate for **rehabilitation personnel** from 1990 (16.6%) to 1991 (16.5%). Rehabilitation practitioners continued to have one of the highest turnover rates (22.1%) within this occupational group. Turnover rate declines from 1990 to 1991 were seen for occupational therapists (19.6% to 17.7%) and for physical therapists (17.5% to 15.6%). Notable increases in turnover rates occurred for speech-language pathologists (10.6% to 14.9%) and for speech-language pathologist assistant/aides (1.6% to 22.8%).

Declines in turnover rates from 1990 to 1991 were observed for many of the personnel employed by acute care hospitals. **Registered nurses**, in particular, had a substantial turnover rate decline from 12.7 percent (1990) to 9.6 percent (1991). Low turnover rates in 1991 were

Figure 5.

Vacancy Rates in Large Urban, Small Urban, Large Town, and Rural Areas

March 31, 1991

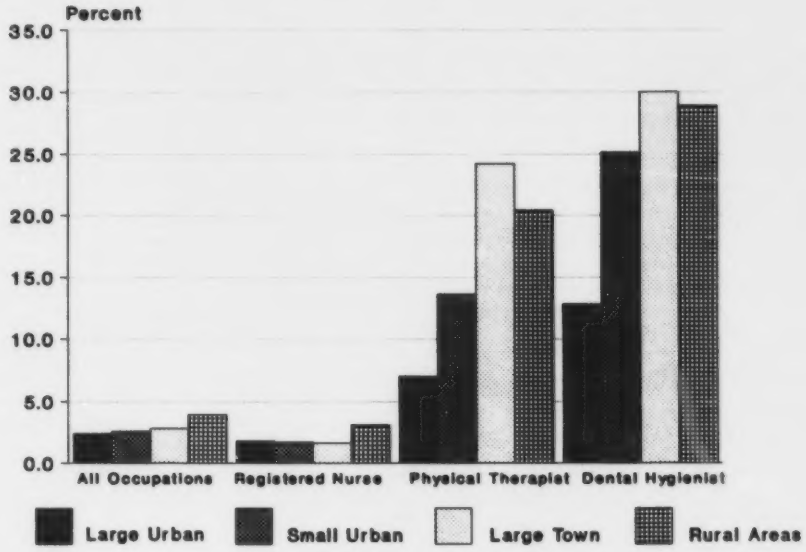

Figure 6.

Vacancy Rates from 1987 to 1991

(March 31)

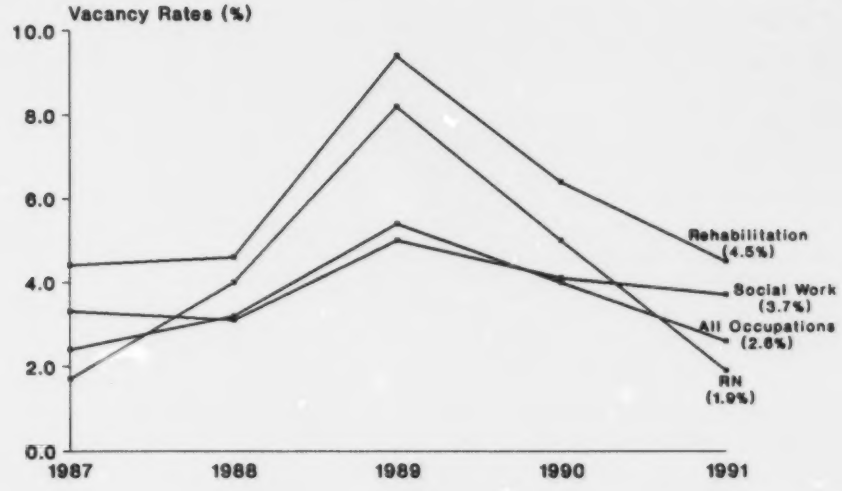

TABLE 9. TURNOVER RATES AND TURNOVER RATE CHANGE
BY OCCUPATIONAL GROUP
MARCH 31, 1990 AND 1991

OCCUPATIONAL GROUPS	1991 FTE POSITIONS	1991 FTE RESIGNATIONS	1991 TURNOVER RATE (%)	1990 TURNOVER RATE (%)	1990-1991 TURNOVER RATE CHANGE*
AMBULANCE PERSONNEL (PAID AND VOLUNTEER)	1,829	172	9.4	9.4	-0.1
CHILD/YOUTH CARE PERSONNEL	1,722	338	19.6	24.9	-5.3
CORRECTIONAL PERSONNEL	1,830	83	4.5	4.5	0.1
DAY CARE PERSONNEL	5,830	2,099	36.0	37.7	-1.7
DENTAL PERSONNEL	3,775	482	12.8	15.8	-3.0
DIETARY PERSONNEL	3,191	379	11.9	12.3	-0.4
EYE CARE PERSONNEL	1,099	204	18.6	14.2	4.4
HEALTH RECORDS PERSONNEL	749	91	12.2	9.5	2.6
HOME CARE PERSONNEL	1,565	294	18.8	19.2	-0.5
DIAGNOSTIC/THERAPEUTIC PERSONNEL	4,909	446	9.1	10.9	-1.9
REGISTERED NURSE PERSONNEL	14,626	1,408	9.6	12.7	-3.1
NURSING PERSONNEL (NON-RN)	8,567	978	11.4	13.4	-2.0
OCCUPATIONAL HEALTH PERSONNEL	126	5	3.6	6.6	-3.1
PHARMACEUTICAL PERSONNEL	2,506	301	12.0	9.5	2.5
PSYCHOLOGICAL PERSONNEL	1,489	92	6.2	5.7	0.5
PUBLIC HEALTH PERSONNEL	283	24	8.5	7.2	1.3
REHABILITATION PERSONNEL	6,118	1,010	16.5	16.6	-0.1
SOCIAL WORK/SERVICE PERSONNEL	3,469	415	12.0	9.1	2.9
PROGRAM ADMIN/CLERICAL SUPPORT	8,927	822	9.2	9.4	-0.2
OTHER HEALTH CARE/SERVICE PERSONNEL	214	24	11.0	9.3	1.7
TOTAL	72,818	9,664	13.3	14.5	-1.2

* TURNOVER RATE CHANGE = 1991 turnover rate - 1990 turnover rate. The turnover rate change calculated may not correspond exactly to the difference between the 1990 and 1991 turnover rates presented in the table, due to the rounding of all figures.

seen in the following registered nurse specialties: out-patient services (4.0%), nursing education (6.2%), maternal/child care (6.3%), operating room nursing (6.4%), and psychiatric nursing (6.4%).

Non-RN nursing personnel also experienced a notable decline in turnover rates from 1990 (13.4%) to 1991 (11.4%). The turnover rate for licensed practical nurses decreased from 10.8 percent (1990) to 8.8 percent (1991). 'Other nursing' personnel had a turnover rate decline from 15.5 percent (1990) to 13.6 percent (1991).

The turnover rate for **diagnostic/therapeutic personnel** declined from 10.9 percent (1990) to 9.1 percent (1991). Substantial turnover declines from 1990 to 1991 were observed for many diagnostic/therapeutic occupations including combined laboratory and x-ray technicians (14.9% to 8.8%), medical laboratory technologists (10.0% to 8.2%), respiratory therapists (12.3% to 10.6%), and medical radiation technologists (11.4% to 8.4%).

8.2 Turnover Rates By Large Urban, Small Urban, Large Town, and Rural Areas

Table 10 provides a breakdown of turnover rates across large urban, small urban, large town, and rural areas for selected health and social service occupations. The total turnover rate for all occupations combined was somewhat higher in large urban centres (14.3%) compared to rural areas (12.5%). However, the table reveals considerable variation between urban and rural turnover rates for different occupations.

Turnover rates were substantially higher in large urban centres compared to rural areas for child/youth care personnel, home care personnel, occupational therapists, and physical therapists.

Other occupations, however, had notably higher turnover rates in rural areas compared to large urban centres. These occupations included combined laboratory and x-ray technicians, dental hygienists, medical laboratory technologists, psychologists, registered nurses, social workers, and speech-language pathologists.

Figure 7 highlights turnover rates by large urban, small urban, large town, and rural areas for selected health and social service occupations.

8.3 Yearly Turnover Rates, 1987 to 1991

The total turnover rate for all health and social service occupations remained relatively constant from 1987 (12.1%) to 1991 (13.3%). There was substantial variation in the pattern of turnover rate change from 1987 to 1991 between occupational groups.

General declines in turnover rates from 1987 to 1991 were reported for occupational therapists (22.2% to 17.7%), physical therapists (23.6% to 15.6%), and ambulance personnel (11.5% to 9.6%).

Some occupations, particularly those employed by hospitals, had fairly constant turnover rates from 1987 to 1990, followed by turnover rate declines in 1991. Occupations which experienced this pattern of turnover rate change from 1987 to 1991 included registered nurses (12.7% to 9.6%), licensed practical nurses (12.5% to 8.8%), and diagnostic/therapeutic occupations (10.5% to 9.1%).

Fairly consistent and substantial increases in turnover rates from 1987 to 1991 occurred for day care personnel (23.6% to 36.0%)[16], eye care personnel (10.5% to 18.6%), home care personnel (12.1% to 18.8%), and speech-language pathologists (7.2% to 14.9%).

No general patterns in turnover rates from 1987 to 1991 were discernable for dental personnel, child/youth care personnel, correctional service personnel, pharmacists, psychologists, or social service/work personnel.

Figure 8 illustrates turnover rates from 1987 to 1991 for selected occupations.

9. Recruitment Difficulties

9.1 Three Month Vacant Positions

In the last section of the survey, employers were requested to indicate the number of vacant positions on March 31, 1991, that had been vacant for three months or longer, while recruitment activities had been in progress. This information was requested from all employers, including day care centres, which were requested to supply information on three month vacancies for the first time in 1991. Of the 885 employers who reported one or more vacancies on March 31, 1991, 408 (46.1%) indicated that the vacancy had been vacant for three months or longer. Overall, the number of employers reporting one or more three month vacancies declined substantially from 1990 (503) to 1991 (408).

Table 11 identifies some of the health and social service occupations which had large percentages of positions vacant for three months or longer from 1990 to 1991. For all health and social service occupations combined, the number of three month vacant positions dropped from 922 (1990) to 501 (1991) and the percentage of three month vacant positions declined from 33.1 percent to 28.3 percent. There was a decline in the number of three month vacant positions for every occupation except public health inspectors.

Registered nurses experienced one of the most substantial declines in the number of three month vacant positions

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[16] Day care personnel were not measured in the 1987 employer survey. The turnover rates given in brackets refer to the turnover rates for day care personnel in 1988 and 1991, respectively.

TABLE 10. TURNOVER RATES FOR SELECTED HEALTH AND SOCIAL SERVICE OCCUPATIONS BY LARGE URBAN, SMALL URBAN, LARGE TOWN, AND RURAL AREA+ MARCH 31, 1991

OCCUPATION	TURNOVER RATE (%)			
	LARGE URBAN	SMALL URBAN	LARGE TOWN	RURAL AREAS
ALL OCCUPATIONS*	14.3	10.1	12.1	12.5
Child/Youth Care Personnel	22.4	11.4	17.0	15.6
Combined Laboratory X-Ray Technicians	6.7	3.2	12.3	10.4
Day Care Personnel	37.4	24.4	30.7	37.6
Dental Hygienists	10.2	12.0	13.3	16.9
Home Care Personnel**	22.9	12.5	13.1	14.6
Medical Laboratory Technologists	8.1	6.4	6.7	14.6
Non-RN Nursing Personnel	12.2	8.1	12.0	11.4
Occupational Therapists	18.2	11.5	30.4	11.4
Physical Therapists	15.6	15.5	18.0	12.9
Psychologists	5.2	3.5	5.2	12.9
Registered Nurses	9.0	9.4	13.2	11.7
Social Workers	11.4	11.7	7.0	13.3
Speech-Language Pathologists	13.5	19.4	13.9	18.1

+ Large urban, small urban, large towns, and rural areas were defined in terms of the following population figures: LARGE URBAN--population > 70,000 (includes Edmonton (CMA) and Calgary (CMA)); SMALL URBAN--10,000 < population < 70,000; LARGE TOWN--5,000 < population < 10,000; and RURAL AREA--population < 5,000.

* All Occupations includes all occupations measured in the 1991 survey.

** Home Care Personnel includes homemakers, homehelpers, and personal care attendants.

Figure 7.

Turnover Rates in Large Urban, Small Urban, Large Town, and Rural Areas

March 31, 1991

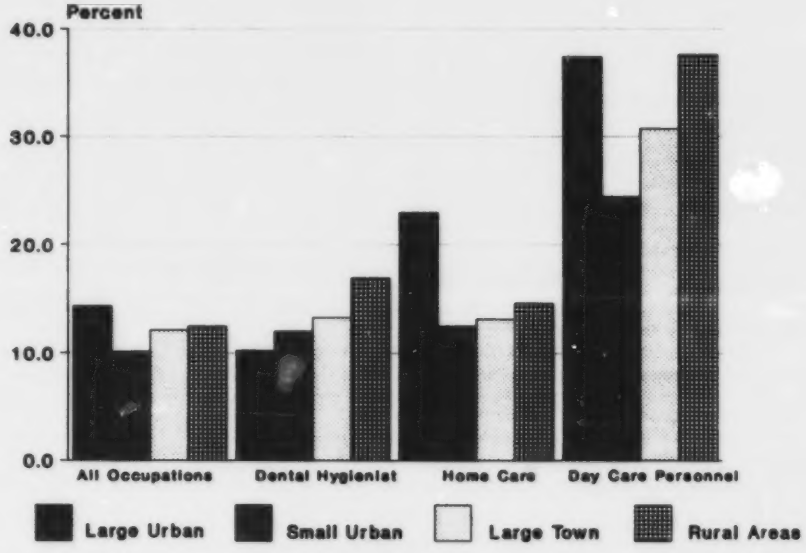
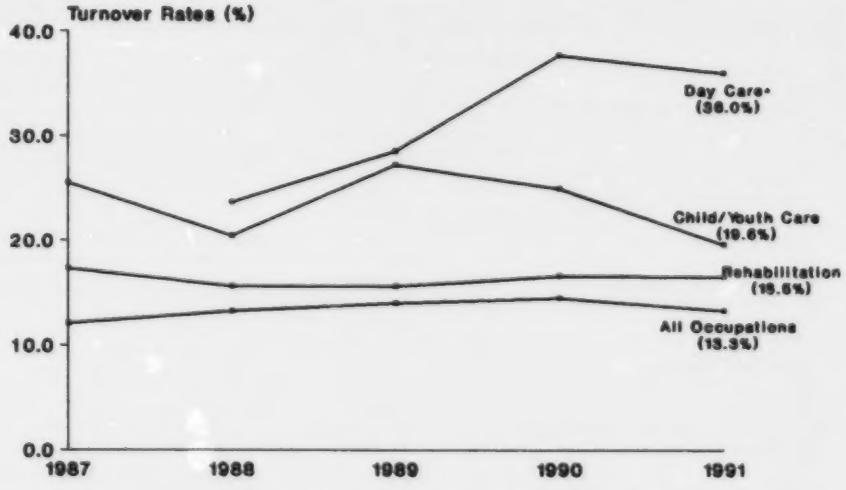


Figure 8.

Turnover Rates from 1987 to 1991

(March 31)



• Day care personnel were not included in the 1987 survey.

TABLE 11. NUMBER AND PERCENT VACANT FULL-TIME EQUIVALENT POSITIONS VACANT FOR THREE MONTHS OR LONGER MARCH 31, 1990 AND 1991*

OCCUPATIONAL GROUP	1990 THREE MONTH FTE VACANT POSITIONS+	1991 THREE MONTH FTE VACANT POSITIONS+	1990 % THREE MONTH VACANT POSITIONS++	1991 % THREE MONTH VACANT POSITIONS++
ALL OCCUPATIONS COMBINED+++	922	501	33.1	28.3
Dental Assistants-Certified Intra-oral	44	18	52.7	41.7
Dental Hygienists	102	96	77.6	78.4
Emergency Medical Technicians-Ambulance	19	14	38.9	46.6
Occupational Therapists	32	26	46.4	62.7
Pharmacists	46	27	55.4	50.5
Physical Therapists	99	66	68.0	67.3
Psychologists	28	17	56.7	49.3
Public Health Inspectors	5	6	55.6	85.7
Registered Nurses	247	35	31.1	12.2
Social Work/Service Personnel	32	15	23.1	12.4
Speech-Language Pathologists	36	17	80.0	85.0

* To allow for comparisons from 1990 to 1991, all full-time equivalent postions reported by day care centres were excluded from the table.
\+ 'Definition of Terms' in Appendix 2(b) gives the formula definitions for vacant FTE positions.
++ Percent three month vacant positions= (number full-time equivalent three month vacant positions/ total number of full-time equivalent vacant positions) X 100.
+++ All occupations combined gives the totals for all the occupations included in the survey.

TABLE 12. PERCENT FULL-TIME EQUIVALENT VACANT POSITIONS REPORTED VACANT THREE MONTHS OR LONGER BY LARGE URBAN, LARGE TOWN, SMALL URBAN, AND RURAL AREAS MARCH 31, 1991

OCCUPATIONAL GROUP	PERCENT THREE MONTH VACANT FTE POSITIONS (%)+			
	LARGE URBAN	SMALL URBAN	LARGE TOWN	RURAL AREAS
ALL OCCUPATIONS COMBINED++	22.1	39.2	45.1	32.2
Dental Hygienists	74.3	82.6	81.5	91.7
Occupational Therapists	42.0	100.0	93.7	83.3
Pharmacists	25.0	50.0	85.7	62.1
Physical Therapists	54.0	77.1	93.5	73.3
Psychologists	38.5	63.6	61.5	66.7
Registered Nurses	4.4	14.5	13.8	37.5
Speech-Language Pathologists	40.0	91.7	71.4	100.0

\+ Percent three month vacant positions= (number full-time equivalent three month vacant positions/ total number of full-time equivalent vacant positions) X 100.
++ All occupations combined gives the totals for all the occupations included in the survey.

from 1990 (247) to 1991 (35). The proportion of three month vacancies for registered nurses dropped significantly from 31.1 percent (1990) to 12.2 percent (1991). Notable declines in the percentage of three month vacancies also occurred for social work/service personnel, dental assistants with intra-oral certification, psychologists, and pharmacists.

Clinical scientists, who are not listed in table 11, also had a high percentage of three month vacant positions (100%). It should be noted that this percentage was based on a comparatively small number of total vacant positions (3).

Table 12 gives the distribution of three month vacancies across large urban, small urban, large town, and rural areas for selected health and social service occupations. The percentage of three month vacancies for all occupations combined was higher in rural areas compared to large urban centres. The percentage of three month vacant positions was especially high in rural areas for speech-language pathologists (100%), dental hygienists (91.7%), occupational therapists (83.3%), and physical therapists (73.3%).

Registered nurses were notable for having one of the lowest percentages of three month vacancies (4.4%) in large urban centres.

9.2 Anticipated Recruitment Difficulties

Employers were requested to identify the health and social service occupations for which they anticipated recruitment difficulties during the next year. This information was requested from all employers, including day care centres, which were asked to report anticipated recruitment problems for the first time in 1991. Among all the employers surveyed, 21.5 percent (1,141) expected recruitment difficulties, while the majority, 65.8 percent (3,484), anticipated no recruitment problems. A total of 12.7 percent (671) did not respond to the question. Overall, the percentage of employers who expected recruitment problems declined slightly from 1990 (23.9%) to 1991 (21.5%).

A comparatively large percentage of employers anticipated problems during 1991 in the recruitment of day care workers with a certificate in early childhood education (73.6%), dental hygienists (47.1%), physical therapists (41.6%), emergency medical technicians-paramedic (36.4%), and emergency medical technicians-ambulance (29.1%).

There was only a small percentage of employers who expected difficulties in the recruitment of non-RN nursing personnel (1.2%), social workers (3.5%), registered nursing personnel (3.7%), diagnostic/therapeutic personnel (5.2%), psychologists (5.3%), and home care personnel (7.3%).

The most frequent reasons given by employers for difficulties in the recruitment of health and social service personnel related to a shortage of available personnel (44.3%), an undesirable location (20.1%), or an inadequate salary (16.9%). The lack of available personnel and an undesirable location were the two most frequent reasons given for problems in the recruitment of ambulance personnel, dental assistants, dental hygienists, diagnostic/therapeutic personnel, registered nurses, pharmacists, psychologists, public health inspectors, occupational therapists, physical therapists, and speech-language pathologists. An inadequate salary, along with a shortage of available personnel, were the two most frequent reasons given for difficulties in the recruitment of child/youth care workers, day care personnel, home care personnel, and rehabilitation practitioners.

10. Further Information

The summary of health and social service personnel provided in this report has served to highlight the types of data analyses that are possible with the information supplied by the employer survey. The data available from the 1991 survey, as well as data from prior survey years, allows for additional analyses tailored to particular occupations, employer groups, or geographical areas.

Individuals or organizations are encouraged to request supplemental information and analyses specific to their needs. It should be noted that the Alberta Health and Social Services Disciplines Committee is able to release information on aggregate data only; data on individual employers is confidential and may only be released to the reporting employer. For further information, please contact:

Alberta Health and Social Services Disciplines Committee

5th Floor, Kensington Place
10011-109 Street
EDMONTON, Alberta
T5J 3S8

Telephone: (403)427-2655

APPENDIX 1. ESTIMATED NUMBER OF UNREPORTED PERMANENT PERSONNEL RESULTING FROM SURVEY NON-RESPONSES
MARCH 31, 1991

EMPLOYER GROUP	NUMBER EMPLOYERS NOT RESPONDING	ESTIMATED NUMBER OF UNREPORTED PERSONNEL**	NUMBER OF REPORTED PERSONNEL	% OF UNREPORTED PERSONNEL
AADAC/FCSS*	3	57	2,086	2.7
ALBERTA FAMILY & SOC. SERVICES	0	0	4,493	0.0
ALBERTA HEALTH	0	0	1,091	0.0
AMBULANCE OPERATORS	0	0	2,269	0.0
COMMUNITY AGENCIES	8	216	6,572	3.2
CORRECTIONAL CENTRES	0	0	2,296	0.0
DAYCARE CENTRES	23	259	6,216	4.0
DENTAL LABORATORIES	1	3	607	0.5
DENTISTS' OFFICES	11	52	4,437	1.2
DENTURE CLINICS	1	2	356	0.6
GROUP HOMES	2	8	1,609	0.5
HEALTH UNIT OFFICES	4	39	3,238	1.2
HOSPITALS/NURSING HOMES	0	0	36,621	0.0
HW CANADA/INDIAN AFFAIRS	0	0	469	0.0
MEDICAL CLINICS	6	102	2,440	4.0
MEDICAL LABORATORIES	2	35	2,513	1.4
OPHTHALMIC DISPENSERS	2	6	814	0.7
OPHTHALMOLOGISTS	0	0	213	0.0
OPTOMETRISTS	2	10	589	1.7
PHARMACIES	5	27	2,638	1.0
POST-SECONDARY INSTITUTIONS	0	0	1,216	0.0
PRIVATE INDUSTRY	2	12	684	1.7
PRIVATE PHYSIOTHERAPISTS	1	4	819	0.5
PSYCHOLOGISTS	4	9	775	1.1
SCHOOL BOARDS	0	0	1,274	0.0
TOTAL	77	841	86,335	1.0

* AADAC (Alberta Alcohol and Drug Abuse Commission) had a response rate of 100 percent. The estimate of unreported personnel is for the three non-responding employers from FCSS (Family and Community Support Services).

** The estimated number of unreported permanent personnel for 1991 is based on the number of personnel reported by the employer in the 1990 survey. If no data is available for 1990, then the number of unreported personnel is estimated from the average number of personnel reported by the same employer group in 1991.

APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
ALL HEALTH/SOCIAL SERVICE OCCUPATIONS		55,443	30,892	86,335	72,818	1,929	2.6	9,664	13.3
Ambulance Personnel (Paid)**	Total	1,141	622	1,763	1,509	57	3.7	146	9.6
	Standard St. John Ambul. Cert.	112	153	265	193	4	2.1	26	13.2
	Advanced St. John Ambul. Cert.	10	17	27	19	0	0.0	2	10.8
	Emergency Medical Techs.-Ambulance	568	275	843	735	29	3.9	73	9.9
	Emergency Medical Techs.-Paramedic	396	64	460	450	22	4.8	37	8.1
	Other Ambulance Personnel	55	113	168	114	2	1.8	9	7.9
Ambulance Personnel (Volunteer)	Total	0	547	547	321	47	14.7	26	8.1
	Standerd St. John Ambul. Cert.	0	345	345	200	28	13.8	15	7.2
	Advanced St. John Ambul. Cert.	0	25	25	19	7	34.2	2	7.9
	Emergency Medical Techs.-Ambulance	0	69	69	44	9	20.7	1	2.3
	Emergency Medical Techs.-Paramedic	0	23	23	12	0	0.0	3	26.1
	Other Ambulance Personnel	0	85	85	47	4	8.6	6	12.9
Child/Youth Care Personnel	Total	1,469	392	1,861	1,722	57	3.3	338	19.6
	Hospital Child Care Workers	17	4	21	19	0	0.0	9	47.4
	Baccalaureate in Child Care	26	7	33	30	0	0.0	5	16.9
	Related Baccalaureate or Masters	264	58	322	299	6	2.0	76	25.3
	Child/Youth Care (Diploma)	426	101	527	500	24	4.7	105	20.9
	Child/Youth Care (Related Diploma)	217	30	247	239	7	2.9	50	20.9
	Child/Youth Care (Unrelated Diploma)	109	21	130	123	4	2.8	14	11.4
	Child/Youth Care Workers (Other)	304	109	413	369	11	2.8	61	16.4
	Houseparents	106	62	168	143	6	4.2	20	13.6

(CONTINUED)

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
**Explanatory notes on AMBULANCE PERSONNEL, DAY CARE PERSONNEL, CLINICAL SCIENTISTS, LABORATORY SCIENTISTS, HOME CARE PERSONNEL, RN-PSYCHIATRIC SPECIALTY, REGISTERED PSYCHIATRIC NURSES, SPEECH-LANGUAGE PATHOLOGISTS, AND OTHER HEALTH CARE/SERVICE PERSONNEL are given in Appendix 2(c).

APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
y Care Personnel**	Total	5,076	1,186	6,262	5,830	161	2.8	2,099	36.0
	Directors (B.Ed. Child Educ.)	101	11	112	110	3	2.7	36	32.9
	Directors (Diploma Child Educ.)	151	7	158	163	9	5.2	51	31.0
	Directors (Cert. Child Educ.)	122	9	131	130	3	2.3	31	23.9
	Directors (Other Day Care Cert.)	48	2	50	50	1	2.0	12	24.0
	Directors (Related Degree/Diploma)	99	4	103	105	4	3.3	30	28.7
	Directors (Unrelated Degree)	46	2	48	47	0	0.0	16	34.0
	Directors (Other)	217	8	225	226	5	2.2	30	13.1
	Child Care Workers (B.Ed. Child Educ.)	172	22	194	185	2	0.8	70	37.7
	Child Care Workers (Diploma Child Educ.)	474	47	521	522	25	4.7	180	34.5
	Child Care Workers (Cert. Child Educ.)	485	53	538	550	39	7.0	130	23.6
	Child Care Workers (Other Day Care Cert.	200	18	218	217	8	3.7	49	22.4
	Child Care Workers (Related Degree/Dip.)	199	40	239	223	4	1.8	97	43.3
	Child Care Workers (Unrelated Degree)	188	51	239	214	0	0.0	89	41.5
	Child Care Workers (Other)	2,574	912	3,486	3,090	60	1.9	1,281	41.5
rrectional Personnel	Total	1,739	61	1,800	1,830	60	3.3	83	4.5
	Correctional Service Workers	519	12	531	536	11	2.1	18	3.3
	Correctional Officers/Security Guards	1,220	49	1,269	1,294	49	3.8	65	5.0
ntal Assistants	Total	1,866	526	2,392	2,182	53	2.4	297	13.6

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*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
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APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Dental Assistants	On-the-job-trained	466	157	623	552	8	1.4	76	13.7
	Certified with intra-oral training	1,295	338	1,633	1,506	42	2.8	207	13.7
	Certified without intra-oral training	105	31	136	124	3	2.4	15	11.7
Dental Hygienists	Total	432	399	831	754	123	16.2	83	11.0
	Dental Hygienists	432	399	831	754	123	16.2	83	11.0
Dental Technicians	Total	541	49	590	591	25	4.2	82	13.8
	Registered Dental Techs.	194	8	202	214	16	7.5	8	3.7
	Non-Registered Dental Techs.	347	41	388	377	9	2.4	74	19.5
Denturists	Total	233	21	254	249	5	2.0	21	8.2
	Certified Denturists	178	15	193	188	2	1.1	5	2.4
	Non-Certified Denturists	55	6	61	61	3	4.9	16	26.2
Dietary Personnel	Total	2,027	2,222	4,249	3,191	53	1.7	379	11.9
	Dietary Technologists	214	107	321	273	6	2.0	33	12.1
	Food Service Workers	1,278	1,822	3,100	2,223	34	1.5	293	13.2
	Dietitians	182	112	294	245	7	2.7	23	9.2
	Nutritionists	31	21	52	44	2	4.6	3	6.9
	Other Dietary Personnel	322	160	482	408	6	1.3	28	6.7
Eye Care Personnel	Total	947	256	1,203	1,099	24	2.2	204	18.6
	Ophthalmic Dispensers (Certified)	403	38	441	433	11	2.4	63	14.6
	Ophthalmic Dispensers (Non-Certified)	265	63	328	304	8	2.5	84	27.6
	Ophthalmic Assistants	92	43	135	115	2	1.3	14	12.2

(CONTINUED)

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
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APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Eye Care Personnel	Optometric Assistants	176	98	274	230	5	2.0	42	18.3
	Orthoptists	11	14	25	18	0	0.0	1	5.6
Health Records Personnel	Total	608	254	862	749	14	1.8	91	12.2
	Health/Medical Records Adm./Librarians	114	25	139	132	6	4.2	13	9.8
	Health/Medical Record Techs.	245	109	354	305	5	1.6	30	9.9
	Medical Dicta-Typists/Transcriptionists	207	103	310	261	3	1.0	39	14.9
	Other Health Care Records Personnel	42	17	59	51	1	1.0	9	17.6
Home Care Personnel**	Total	542	1,954	2,496	1,565	46	2.9	294	18.8
	Homemakers	315	1,169	1,484	917	17	1.9	246	26.8
	Homehelpers	107	369	476	309	18	5.7	21	6.8
	Personal Care Attendants	120	416	536	339	11	3.2	28	8.1
Lab/X-Ray/Diag/Therapeutic Personnel	Total	3,898	1,793	5,691	4,909	114	2.3	446	9.1
	Combined Lab/X-Ray Techs.	172	152	324	251	3	1.0	22	8.8
	Clinical Scientists**	17	5	22	22	3	11.4	2	9.1
	Medical Lab. Techs.	1,820	785	2,605	2,251	39	1.7	186	8.2
	Medical Lab. Asst./Aides	542	290	832	702	15	2.1	88	12.5
	Electroencephalograph (EEG) Techs.	21	19	40	33	2	6.2	1	3.1
	Respiratory Therapists	350	97	447	416	17	4.1	44	10.6
	Electrocardiograph (ECG/EKG) Techs.	53	22	75	64	0	0.0	3	4.7
	Dialysis Techs.	13	0	13	13	0	0.0	1	3.8

(CONTINUED)

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APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Lab/X-Ray/Diag/Therapeutic Personnel	Orthopaedic Asst./Techs.	28	7	35	32	0	0.0	0	0.0
	Laboratory Scientists**	31	1	32	34	3	7.4	8	23.5
	Medical Radiation Techs.	548	336	884	732	16	2.1	62	8.4
	Nuclear Medicine Techs.	70	18	88	81	2	2.5	10	12.3
	Radiation Therapists	47	14	61	54	0	0.0	1	1.9
	Diagnostic Medical Sonograhers	113	36	149	142	11	7.4	17	11.7
	Other Lab./X-Ray Personnel	73	11	84	85	6	7.1	4	4.1
Registered Nursing Personnel	Total	10,084	8,517	18,601	14,626	284	1.9	1,408	9.6
	Intensive Care Unit	773	513	1,286	1,060	31	2.9	104	9.8
	Operating Room	395	279	674	540	6	1.0	35	6.4
	Recovery Room	76	96	172	126	2	1.6	5	3.6
	Intravenous Therapy	18	28	46	32	0	0.0	0	0.0
	Medical/Surgical	2,120	2,151	4,271	3,254	59	1.8	337	10.4
	Maternal/Child	453	451	904	690	11	1.6	44	6.3
	Emergency Room	301	360	661	493	12	2.3	49	9.9
	Psychiatric Ward**	402	263	665	546	13	2.3	35	6.4
	Pediatrics	305	311	616	469	8	1.7	52	11.0
	Nursing Education	630	244	874	764	12	1.5	47	6.2
	Administration	1,347	223	1,570	1,478	19	1.3	179	12.1
	Community/Public Health	517	270	787	675	23	3.3	73	10.8
	Home Care	341	300	641	496	5	1.0	52	10.4
	Offices and Clinics	311	410	721	525	9	1.7	64	12.1

(CONTINUED)

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
**Explanatory notes on AMBULANCE PERSONNEL, DAY CARE PERSONNEL, CLINICAL SCIENTISTS, LABORATORY SCIENTISTS, HOME CARE PERSONNEL, RN-PSYCHIATRIC SPECIALTY, REGISTERED PSYCHIATRIC NURSES, SPEECH-LANGUAGE PATHOLOGISTS, AND OTHER HEALTH CARE/SERVICE PERSONNEL are given in Appendix 2(c).

APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Registered Nursing Personnel	RN - Other	221	172	393	319	12	3.6	27	8.3
	Occupational/Staff Health	161	105	266	219	6	2.5	24	10.7
	Labor Delivery/Recovery Suite	201	178	379	293	3	1.0	20	6.7
	Short Stay Unit	79	60	139	110	1	0.9	5	4.5
	Long Term Care/Rehabilitation	778	1,302	2,080	1,455	26	1.8	152	10.4
	Out-Patient Services	157	154	311	238	4	1.5	10	4.0
	General Duty	498	647	1,145	848	27	3.1	100	11.7
Non-RN Nursing Personnel	Total	5,759	5,353	11,112	8,567	132	1.5	978	11.4
	Graduate Nurses	137	84	221	181	2	0.8	21	11.6
	Registered Psychiatric Nurses**	629	232	861	776	31	3.9	97	12.4
	Licensed Practical Nurses	2,050	2,081	4,131	3,127	37	1.2	276	8.8
	Operating Room Techs.	63	39	102	83	0	0.0	4	4.2
	Other Nursing Staff	2,628	2,766	5,394	4,067	56	1.4	552	13.6
	Porters	252	151	403	335	8	2.2	30	9.0
Occupational Health Personnel	Total	110	26	136	126	3	2.4	5	3.6
	Occupational Hygienists	44	10	54	50	1	2.0	5	9.0
	Occupational Hygienist Techs.	66	16	82	76	2	2.6	0	0.0
Pharmaceutical Personnel	Total	1,909	1,063	2,972	2,506	65	2.6	301	12.0
	Pharmacists	1,457	776	2,233	1,898	53	2.8	216	11.4
	Pharmacy Asst./Techs.	429	277	706	580	13	2.2	86	14.7
	Other Pharmaceutical Personnel	23	10	33	28	0	0.0	0	0.0
Psychological Personnel	Total	1,103	693	1,796	1,489	39	2.6	92	6.2

(CONTINUED)

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
**Explanatory notes on AMBULANCE PERSONNEL, DAY CARE PERSONNEL, CLINICAL SCIENTISTS, LABORATORY SCIENTISTS, HOME CARE PERSONNEL, RN-PSYCHIATRIC SPECIALTY, REGISTERED PSYCHIATRIC NURSES, SPEECH-LANGUAGE PATHOLOGISTS, AND OTHER HEALTH CARE/SERVICE PERSONNEL are given in Appendix 2(c).

APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Psychological Personnel	Psychologists	745	408	1,153	984	35	3.5	52	5.2
	Psychological Assts.	50	62	112	83	2	2.4	9	10.2
	Other Psych./Counsellors/Therapists	308	223	531	422	3	0.6	32	7.6
Public Health Personnel	Total	262	20	282	283	11	3.7	24	8.5
	Public Health Inspectors	113	6	119	123	7	5.7	21	16.7
	Community Health Rep./Workers	149	14	163	160	4	2.2	4	2.2
Rehabilitation Therapy Personnel	Total	4,785	2,119	6,904	6,118	273	4.5	1,010	16.5
	Occupational Therapists	307	165	472	431	42	9.6	77	17.7
	Occupational Therapy Asst./Aides	128	31	159	147	3	2.0	8	5.1
	Physical Therapists	697	371	1,068	981	98	10.0	153	15.6
	Other Physical Therapy Personnel	156	132	288	223	1	0.2	35	15.5
	Speech-Language Pathologists**	272	99	371	342	20	5.9	51	14.9
	Speech Pathology Asst./Aides	40	43	83	64	2	3.1	15	22.8
	Clinical Audiologists	21	11	32	27	1	1.9	4	13.0
	Audiometric Techs.	10	8	18	14	0	0.0	9	60.7
	Recreational Therapy Asst./Aides	179	169	348	267	4	1.3	53	19.7
	Prosthetists/Orthotists	20	0	20	23	3	13.0	1	4.3
	Prosthetic and Orthotic Clinicians/Techs	30	2	32	32	1	3.1	0	0.0
	Rehabilitation Practitioners	1,063	364	1,427	1,270	25	1.9	280	22.1
	Remedial Gymnasts	14	0	14	15	1	6.7	1	6.7
	Recreational Therapists	237	85	322	289	10	3.3	39	13.5

(CONTINUED)

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
**Explanatory notes on AMBULANCE PERSONNEL, DAY CARE PERSONNEL, CLINICAL SCIENTISTS, LABORATORY SCIENTISTS, HOME CARE PERSONNEL, RN-PSYCHIATRIC SPECIALTY, REGISTERED PSYCHIATRIC NURSES, SPEECH-LANGUAGE PATHOLOGISTS, AND OTHER HEALTH CARE/SERVICE PERSONNEL are given in Appendix 2(c).

APPENDIX 2(a). HEALTH AND SOCIAL SERVICE PERSONNEL OCCUPATIONAL DATA SUMMARY--MARCH 31, 1991*

		FULL-TIME PERSONNEL	PART-TIME PERSONNEL	TOTAL PERSONNEL	FTE POSITIONS	FTE VACANT POSITIONS	VACANCY RATE (%)	FTE RESIGNATIONS	TURNOVER RATE (%)
Rehabilitation Therapy Personnel	Rehabilitation Aides	1,504	610	2,114	1,872	63	3.4	274	14.6
	Other Rehabilitation Personnel	107	29	136	124	2	1.6	15	11.7
Social Service Personnel	Total	569	69	638	614	10	1.6	90	14.6
	Social Service Aides	48	10	58	53	0	0.0	21	38.7
	Alcoholism/Addiction Counsellors	444	42	486	473	8	1.6	53	11.2
	Life Skills Coaches	77	17	94	88	3	2.8	16	18.2
Social Work Personnel	Total	2,574	348	2,922	2,855	107	3.7	326	11.4
	Master's of Social Work	436	87	523	500	21	4.1	43	8.5
	Related Master's Degree	74	19	93	90	6	6.7	21	22.9
	Bachelor's of Social Work	876	86	962	965	46	4.7	111	11.5
	Unrelated Master's/Bachelor's Degree	423	41	464	452	9	1.9	51	11.2
	Other Social Workers	339	61	400	379	10	2.5	35	9.1
	Social Services Diploma	426	54	480	470	17	3.6	67	14.3
Other Health/Social Service Personnel**	Total	7,769	2,402	10,171	9,141	171	1.9	845	9.2
	Other Health/Social Service Personnel	7,769	2,402	10,171	9,141	171	1.9	845	9.2

*Definitions for FTE Positions, Vacancy Rates, and Turnover Rates are given in Appendix 2(b).
**Explanatory notes on AMBULANCE PERSONNEL, DAY CARE PERSONNEL, CLINICAL SCIENTISTS, LABORATORY SCIENTISTS, HOME CARE PERSONNEL, RN-PSYCHIATRIC SPECIALTY, REGISTERED PSYCHIATRIC NURSES, SPEECH-LANGUAGE PATHOLOGISTS, AND OTHER HEALTH CARE/SERVICE PERSONNEL are given in Appendix 2(c).

Appendix 2(b). Definition of Terms

1. Full-time Equivalent Positions (FTE positions):
   FTE Positions = [full-time + (part-time/2)] number of personnel +
   [full-time + (part-time/2)] number of vacancies

2. Full-time Equivalent Vacancies (FTE vacant positions):
   FTE Vacant Positions = [full-time + (part-time/2)] number of vacancies

3. Vacancy Rate:
   $$\textbf{Vacancy Rate} = \frac{\text{full-time equivalent vacant positions}}{\text{full-time equivalent positions}} \times 100$$

4. Full-time Equivalent Resignations (FTE resignations):
   FTE Resignations = [full-time + (part-time/2)] number of resignations

5. Turnover Rate:
   $$\textbf{Turnover Rate} = \frac{\text{full-time equivalent resignations}}{\text{full-time equivalent positions}} \times 100$$

Appendix 2(c). Explanatory Notes on Occupations Measured

1. In 1990, no data was collected on ambulance personnel employed by acute care hospitals. Information on ambulance personnel employed by acute care hospitals was collected for the first time in 1991.
2. There were an estimated 259 unreported permanent day care personnel resulting from the non-responses of some day care centres to the 1991 survey (See Appendix 1).
3. In 1990, employers supplied data on *Medical Laboratory Scientists*. In 1991, this occupational group was divided into two separate occupational categories: *Clinical Scientists* (Masters or Ph.D. level training) and *Laboratory Scientists* (B.Sc. degree or equivalent).
4. A large proportion of the growth in the number of permanent home care personnel from 1990 to 1991 was due to the addition of some private contracting agencies of home care personnel in the 1991 survey.
5. In 1990, registered psychiatric nurses (RPNs) from one psychiatric hospital were included in the category of registered nurse (RN)- psychiatric speciality. In 1991, all RPNs were counted under the RPN category.
6. The number of speech-language pathologists in the 1991 survey may have been partially inflated by double counting between health units and school boards. Speech-language pathologists working in school settings may be employed by health units, by school boards, or through some contract funding arrangement between these two employers.
7. 'Other Health and Social Service Personnel' includes program administrators, clerical support and other health and social service personnel not elsewhere classified.

APPENDIX 3
CASUAL/CONTRACT/TEMPORARY/RELIEF PERSONNEL
EMPLOYED BETWEEN MARCH 1, 1991 AND MARCH 31, 1991:
NUMBER EMPLOYED AND AVERAGE HOURS WORKED BY OCCUPATION
MARCH 31, 1991*

OCCUPATIONAL GROUP		# CASUAL WORKERS	# CASUAL WORKERS WITH HOURS REPORTED	TOTAL CASUAL HOURS REPORTED	MEAN HOURS WORKED PER WORKER	CASUAL HOURS CONVERTED TO F-T WORKER**
TOTAL		11,810	10,073	480,635	47.7	4,005
Child/Youth Care Personnel	Total	330	316	18,272	57.8	152
	Hospital Child Care Workers	7	7	803	114.7	7
	Related Baccalaureate or Masters	28	28	1,384	49.4	12
	Child/Youth Care (Diploma)	1	1	140	140.0	1
	Child/Youth Care (Related Diploma)	3	3	507	169.0	4
	Child/Youth Care Workers (Other)	240	240	10,324	43.0	86
	Houseparents	51	37	5,114	138.2	43
Day Care Personnel	Total	874	859	50,115	58.3	418
	Directors	55	55	5,524	100.4	46
	Child Care Workers	819	804	44,591	55.5	372
Correctional Personnel	Total	57	57	5,052	88.6	42
	Correctional Service Workers	38	38	3,074	80.9	26
	Correctional Officers/Security Guards	19	19	1,978	104.1	16
Dental Assistants	Total	65	63	1,767	28.0	15
	On-the-job-trained	19	19	518	27.3	4
	Certified with intra-oral training	45	43	1,168	27.2	10

(CONTINUED)

*Day care centres and post-secondary institutions were requested to supply information on casual/contract personnel for the first time in the 1991 survey-no information on causual/contract personnel had been requested from these employers in prior survey years. Ambulance operators were not requested to provide information on casual/contract personnel in the 1991 survey or in any other previous employer survey.
**The total number of casual hours were converted to the equivalent number of workers working full-time for one month. In the computation, the total number of hours worked by casual personnel was divided by the monthly hours worked by one full-time worker (120 hours - based on a 30 hour week).

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MARCH 31, 1991*

OCCUPATIONAL GROUP		# CASUAL WORKERS	# CASUAL WORKERS WITH HOURS REPORTED	TOTAL CASUAL HOURS REPORTED	MEAN HOURS WORKED PER WORKER	CASUAL HOURS CONVERTED TO F-T WORKER**
Dental Assistants	Certified without intra-oral training	1	1	81	81.0	1
Dental Hygienists	Total	111	111	3,413	30.7	28
	Dental Hygienists	111	111	3,413	30.7	28
Dental Technicians	Total	2	2	99	49.5	1
	Non-Registered Dental Techs.	2	2	99	49.5	1
Dietary Personnel	Total	389	275	14,377	52.3	120
	Dietary Technologists	6	5	253	50.6	2
	Food Service Workers	238	163	9,548	58.6	80
	Dietitians	68	58	3,339	57.6	28
	Other Dietary Personnel	77	49	1,237	25.2	10
Eye Care Personnel	Total	7	7	413	59.0	3
	Ophthalmic Dispensers (Certified)	1	1	56	56.0	0
	Ophthalmic Dispensers (Non-Certified)	1	1	8	8.0	0
	Ophthalmic Assistants	3	3	287	95.7	2
	Orthoptists	2	2	62	31.0	1
Health Records Personnel	Total	12	12	822	68.5	7
	Health/Medical Record Techs.	4	4	192	48.0	2

(CONTINUED)

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Health Records Personnel	Medical Dicta-Typists/Transcriptionists	5	5	312	62.4	3
	Other Health Care Records Personnel	3	3	318	106.0	3
Home Care Personnel	Total	611	611	32,197	52.7	268
	Homemakers	242	242	13,475	55.7	112
	Homehelpers	20	20	1,608	80.4	13
	Personal Care Attendants	349	349	17,114	49.0	143
Lab/X-Ray/Diag/Therapeutic Personnel	Total	196	190	8,298	43.7	69
	Combined Lab/X-Ray Techs.	15	15	400	26.7	3
	Medical Lab. Techs.	86	86	4,287	49.8	36
	Medical Lab. Asst./Aides	26	24	1,374	57.2	11
	Respiratory Therapists	30	30	584	19.5	5
	Electrocardiograph (ECG/EKG) Techs.	3	2	116	58.0	1
	Laboratory Scientists	2	2	292	146.0	2
	Medical Radiation Techs.	33	30	1,241	41.4	10
	Nuclear Medicine Techs.	1	1	4	4.0	0
Registered Nursing Personnel	Total	4,983	3,980	164,574	41.4	1,371

(CONTINUED)

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OCCUPATIONAL GROUP		# CASUAL WORKERS	# CASUAL WORKERS WITH HOURS REPORTED	TOTAL CASUAL HOURS REPORTED	MEAN HOURS WORKED PER WORKER	CASUAL HOURS CONVERTED TO F-T WORKER**
Registered Nursing Personnel	Registered Nurses	4,983	3,980	164,574	41.4	1,371
Non-RN Nursing Personnel	Total	2,879	2,394	120,047	50.1	1,000
	Graduate Nurses	16	15	930	62.0	8
	Registered Psychiatric Nurses	75	75	2,648	35.3	22
	Licensed Practical Nurses	1,447	1,195	58,879	49.3	491
	Other Nursing Staff	1,328	1,105	57,383	51.9	478
	Porters	13	4	207	51.7	2
Occupational Health Personnel	Total	3	3	170	56.7	1
	Occupational Hygienist Techs.	3	3	170	56.7	1
Pharmaceutical Personnel	Total	178	170	7,478	44.0	62
	Pharmacists	170	164	6,994	42.6	58
	Pharmacy Asst./Techs.	7	5	467	93.4	4
	Other Pharmaceutical Personnel	1	1	17	17.0	0
Psychological Personnel	Total	159	144	8,107	56.3	68
	Psychologists	83	76	4,179	55.0	35
	Psychological Assts.	44	41	2,338	57.0	19
	Other Psych./Counsellors/Therapists	32	27	1,590	58.9	13

(CONTINUED)

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Public Health Personnel	Total	2	2	66	33.0	1
	Public Health Inspectors	2	2	66	33.0	1
Rehabilitation Therapy Personnel	Total	596	537	25,663	47.8	214
	Occupational Therapists	64	51	1,825	35.8	15
	Occupational Therapy Asst./Aides	1	1	98	98.0	1
	Physical Therapists	123	89	4,640	52.1	39
	Other Physical Therapy Personnel	13	10	579	57.9	5
	Speech-Language Pathologists	18	17	986	58.0	8
	Speech Pathology Asst./Aides	5	5	315	63.0	3
	Clinical Audiologists	6	3	99	33.0	1
	Audiometric Techs.	2	2	104	52.0	1
	Recreational Therapy Asst./Aides	7	7	220	31.4	2
	Prosthetists/Orthotists	1	1	32	32.0	0
	Rehabilitation Practitioners	16	16	1,033	64.6	9
	Remedial Gymnasts	2	2	100	50.0	1
	Recreational Therapists	13	13	1,389	106.8	12
	Rehabilitation Aides	302	302	13,592	45.0	113
	Other Rehabilitation Personnel	23	18	651	36.2	5

(CONTINUED)

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OCCUPATIONAL GROUP		# CASUAL WORKERS	# CASUAL WORKERS WITH HOURS REPORTED	TOTAL CASUAL HOURS REPORTED	MEAN HOURS WORKED PER WORKER	CASUAL HOURS CONVERTED TO F-T WORKER**
Social Service Personnel	Total	45	45	1,755	39.0	15
	Social Service Aides	4	4	453	113.2	4
	Alcoholism/Addiction Counsellors	23	23	1,028	44.7	9
	Life Skills Coaches	18	18	274	15.2	2
Social Work Personnel	Total	116	105	5,900	56.2	49
	Master's of Social Work	2	2	38	19.0	0
	Bachelor's of Social Work	1	1	20	20.0	0
	Unrelated Master's/Bachelor's Degree	1	1	22	22.0	0
	Other Social Workers	112	101	5,820	57.6	49
Other Health Care/Service Personnel	Total	195	190	12,050	63.4	100
	Other Health/Social Service Personnel	195	190	12,050	63.4	100

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